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The Status of the Airport and Airway Trust Fund



A SPECIAL STUDY

3733-2

**THE STATUS OF THE
AIRPORT AND AIRWAY TRUST FUND**

**The Congress of the United States
Congressional Budget Office**

NOTES

Unless otherwise indicated, all years referred to in this report are fiscal years.

Details in the text and tables of this report may not add to totals because of rounding.

CBO baseline projections are as of November 1988.

Cover photograph from the files of the Federal Aviation Administration.

PREFACE

The Airport and Airway Trust Fund has been a focal point for controversy surrounding the current congestion in the aviation system and the level of federal support for aviation programs. The existence of an accumulated surplus in the fund has led some to question whether users of the aviation system are receiving their fair share of government spending given the aviation excise taxes they pay. At the request of the Senate Budget Committee, this study examines the Airport and Airway Trust Fund, analyzes the sources and implications of the current accumulated surplus in the fund, and provides some options the Congress might consider for the future financing of aviation programs. In keeping with the mandate of the Congressional Budget Office to provide objective analysis, the report makes no policy recommendations.

Mark R. Dayton of CBO's Natural Resources and Commerce Division wrote the report under the supervision of Jenifer Wishart. Mitchell Rosenfeld made substantial contributions throughout the project. Everett M. Ehrlich provided valuable assistance in the initial phases of the study. The author wishes to thank W. David Montgomery, Linda Radey, John Sabelhaus, John Fischer, Kathleen Ausley, Tom McDonnell, and Steve Hornburg for their many helpful suggestions and comments. Francis S. Pierce edited the manuscript. Nancy H. Brooks provided production support. Gwen Coleman typed the drafts, and Kathryn Quattrone prepared the report for publication.

James L. Blum
Acting Director

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CONTENTS

	SUMMARY	ix
I	INTRODUCTION AND HISTORY OF THE TRUST FUND	1
	Purpose of the Trust Fund: Capital Account versus User Financing	1
	Legislative History of the Trust Fund	3
	Financial History of the Trust Fund	11
II	AN ANALYSIS OF THE ACCUMULATED SURPLUS IN THE TRUST FUND	19
	Who Pays for What?	19
	Base-Case Recalculation of Trust Fund Balances	23
	Trust Fund Balances with Capital- Only Financing	26
	Trust Fund Balances with Full User Financing	27
	Conclusion	29
III	BASELINE AND ALTERNATIVE PROJECTIONS OF THE TRUST FUND	33
	Baseline Projections	33
	The Trust Fund with No Tax Rate Reduction	37
	Alternative Calculations of Trust Fund Balances	38
	Conclusions	44

IV	OPTIONS FOR AVIATION SPENDING AND FINANCING	49
	Option I: Continue Current Policy	50
	Option II: Eliminate the Tax Rate Reduction	51
	Option III: Restructure the Trust Fund as a Dedicated Capital Fund	53
	Option IV: Transform the Trust Fund into a Full User-Pay System	55
	GLOSSARY	59

TABLES

1.	Aviation Excise Tax Rates: 1970-1990	6
2.	Airport and Airway Trust Fund	12
3.	Base Case and Full Funding of FAA Spending by the Trust Fund	24
4.	Baseline Projection of FAA Outlays	35
5.	Baseline Projections of the Airport and Airway Trust Fund	36
6.	Projection of the Airport and Airway Trust Fund with No Tax Rate Reduction	39
7.	Baseline and Alternative Projections of Trust Fund	41
8.	Alternative Projections of the Trust Fund with No Tax Rate Reduction	42
9.	Summary of Projected Tax Revenue, FAA Expenditures, and Trust Fund Balances	45
10.	Projection of Trust Fund Revenue, Outlays, and Balances Under Option I	50
11.	Projection of Trust Fund Revenue, Outlays, and Balances Under Option II	51
12.	Projection of Trust Fund Revenue, Outlays, and Balances Under Option III	54
13.	Projection of Trust Fund Revenue, Outlays, and Balances Under Option IV	56

FIGURES

S-1.	Federal Outlays for Airports and Airways in 1988	xi
1.	Total Trust Fund Receipts and FAA Outlays, 1971-1988	30

SUMMARY

The Airport and Airway Trust Fund has accumulated a substantial surplus since it was established in 1971. Some see this accumulated surplus as evidence that the federal government is not spending enough on capital development for aviation and that it has been hoarding the aviation excise taxes imposed to finance that capital spending. The accumulated surplus in the trust fund does not, however, provide a good indicator of either the financial status of the aviation system or the system's investment needs.

The purpose of the trust fund is to account for the receipt and expenditure of revenue from aviation excise taxes earmarked for spending on aviation programs. Much of the current controversy surrounding the trust fund concerns whether this spending should include all of the costs of the aviation system or only its capital requirements. The trust fund currently finances more than the capital costs of the aviation system, but it does not finance all of the costs that private-sector users impose on the system.

The accumulated trust fund surplus, therefore, does not necessarily indicate that system users have been denied benefits from their payment of aviation excise taxes, nor does it indicate that investment in aviation infrastructure has been insufficient. All it represents is the excess of aviation excise tax revenue and interest income over the portion of aviation program expenses that have been funded by the trust fund.

This study examines the history of trust fund income and spending; the degree to which the public sector has subsidized private-sector use of the aviation system; and alternative interpretations of trust fund balances based on capital-only and full user-pay approaches to trust fund accounting. The analysis is then extended to the 1989-1994 period under baseline projections of the Congressional Budget Office (CBO). These projections show that, under current policy, the subsidy of private-sector users of the aviation system by general taxpayers would continue and, in fact, increase.

HISTORY OF THE TRUST FUND

The Airport and Airway Revenue Act of 1970 created the trust fund and provided that it would finance investments in the airport and airway system and, to the extent funds were available, cover the operating costs of the airway system as well. Proposals by the Nixon Administration in 1971 to restrict capital spending from the trust fund, while fully funding Federal Aviation Administration (FAA) operations from it, led the Congress to restrict trust fund spending to only the capital costs of the aviation system.

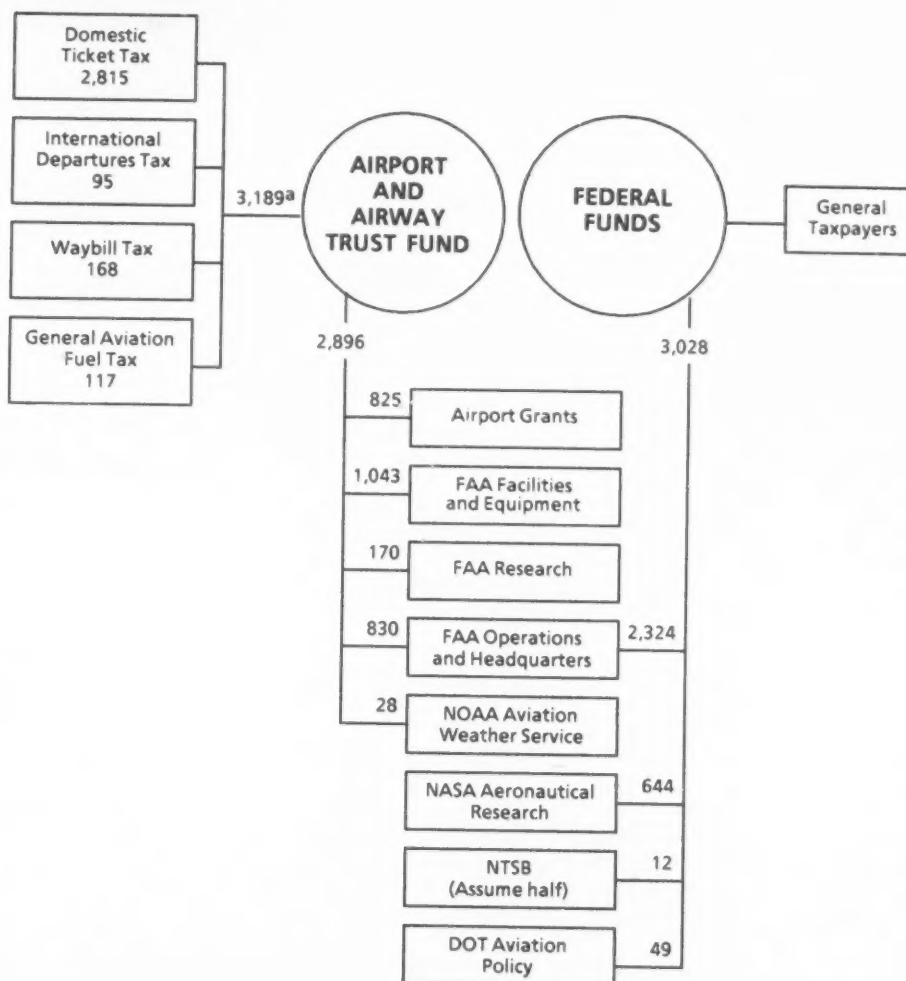
Beginning in 1977, the trust fund was authorized to fund again a portion of FAA operations spending in addition to aviation capital requirements, but this funding was limited to about 15 percent of FAA outlays for operations through 1980. The reauthorizations of aviation programs in 1982 and 1987 continued trust fund financing of FAA operations but limited the amount by tying it to funding of aviation capital programs. These limits have restricted the trust fund to financing an average of only 27 percent of FAA operations since 1980. As a result of this restriction, the general fund of the Treasury finances nearly half of total FAA spending for the aviation system.

STATUS OF THE TRUST FUND

The trust fund is currently financed by a system of aviation excise taxes levied on domestic and international airline passengers, air cargo, and general aviation fuel. Current spending from the trust fund covers all capital and research expenditures for the airway system, finances grants-in-aid to airports, and funds a small portion of FAA operations. The Summary Figure shows trust fund tax revenues and outlays and general fund spending on aviation programs for 1988. The trust fund had an unexpended balance of over \$11 billion and an accumulated surplus of \$5.8 billion at the end of 1988 (commitments against the cash--or unexpended--balance totaled \$5.3 billion).

Under provisions of the Airport and Airway Capacity Expansion Act of 1987, aviation excise tax rates on domestic passenger tickets, air cargo, and general aviation fuel are to be cut in half in January

Summary Figure.
Federal Outlays for Airports and Airways in 1988
 (In millions of dollars)



SOURCE: Congressional Budget Office, based on federal budget data.

NOTES: FAA = Federal Aviation Administration.
 NOAA = National Oceanic and Atmospheric Administration.
 NASA = National Aeronautics and Space Administration.
 NTSB = National Transportation Safety Board.
 DOT = Department of Transportation.

a. Excludes tax refunds of \$6 million.

1990 if spending for aviation capital programs does not reach certain levels in 1988 and 1989. Under CBO baseline projections, these levels would not be met, and the tax rate reductions would take effect. The result would be a \$10.1 billion reduction in taxes for private-sector users of the aviation system. In spite of this tax rate reduction, the unexpended balance in the trust fund under the CBO baseline projection would exceed \$12 billion in 1994 and the accumulated surplus, while declining, would still exceed \$3.6 billion.

WHO PAYS FOR AVIATION SPENDING?

The Federal Aviation Administration has estimated that private-sector users are responsible for about 85 percent of FAA's spending for aviation programs and that the public sector is responsible for the remainder. Private-sector users of the aviation system, through their payment of aviation-related excise taxes, have not financed this share of FAA spending. Instead, they have received a general fund subsidy of \$17 billion, which is equal to the difference between the private-sector share of FAA spending and aviation-related excise taxes since the start of the trust fund.

From the viewpoint that sees the trust fund as a capital-only account, aviation-related excise tax revenue has been more than sufficient to cover all FAA capital spending. If the trust fund had not also financed some FAA operations spending, both the unexpended and uncommitted balances in the trust fund would have been \$13.5 billion higher at the end of 1988. From the viewpoint that sees the trust fund as a full user-pay system, tax revenue has not been sufficient to cover the full private-sector share from the start of the trust fund. Therefore, if the fund had financed the full private-sector share, it would have had large and negative unexpended and uncommitted balances by the end of 1988.

Under CBO's baseline projections, the general fund would continue to subsidize private-sector users of the aviation system through 1994, and this subsidy would grow significantly as a result of the projected tax rate reduction in 1990. Without the tax rate reduction, the subsidy would total \$8.8 billion between 1989 and 1994; with the tax rate reduction, the subsidy would total \$18.9 billion in the same

period. Under CBO baseline projections, the public sector would pay nearly four times its share of \$6.4 billion for aviation spending during the 1989-1994 period.

OPTIONS FOR TRUST FUND SPENDING AND FINANCING

This study presents four options that represent different policy directions for the trust fund. The first option would be to maintain current policy. Under CBO's baseline projections, the general fund subsidy for private-sector users of the aviation system would continue and increase. This option also would result in less than full funding of FAA capital spending from aviation-related excise tax revenue, would increase slightly the unexpended balance in the trust fund, and would reduce the accumulated surplus by only about one-third.

A second option would be to eliminate the tax rate reduction that would occur in January 1990 under CBO's baseline projections, while leaving FAA spending and trust fund accounting unchanged. Relative to the CBO baseline, this option would increase aviation-related excise tax revenue by \$10.1 billion in the 1990-1994 period and would decrease the federal budget deficits over the same period by a cumulative \$7.6 billion.

A third option would be to restructure the trust fund as a purely capital account. Under this option, aviation-related excise taxes would be set to equal FAA budget authority for capital programs. Relative to CBO's baseline projections, this option would increase tax revenues by \$5.7 billion and decrease federal budget deficits by \$4.3 billion over the 1990-1994 period.

A fourth option would be to restructure the trust fund by canceling the current surplus and raising excise taxes so that private-sector users paid their full share of the costs of the aviation system. It would recognize that the accumulated surplus in the trust fund is the result of past general fund subsidies and is not in fact owed to private-sector users of the system. Relative to CBO's baseline for the 1990-1994 period, this option would increase aviation excise tax revenue by \$19.2 billion, thus reducing federal budget deficits by \$14.4 billion,

and would divide aviation system financing more equitably between private-sector users and general taxpayers.

CHAPTER I

INTRODUCTION AND HISTORY OF THE TRUST FUND

The Congress has periodically faced the problems of growing congestion, capacity constraints, and public concern about safety in the nation's aviation system. From the Federal Aviation Act of 1958 through the Airport and Airway Safety and Capacity Expansion Act of 1987, growth in air travel has recurrently bumped up against institutional and physical constraints on the system's ability to handle that growth. Each time, the Congress has authorized changes in programs, taxes, and/or spending in an effort to increase the system's capacity. It established the Airport and Airway Trust Fund (trust fund) in 1970 to provide a dedicated source of funding for the aviation system independent of the general fund.¹ The trust fund would act as a repository for aviation excise tax revenue from which the capital investment needs and operating costs of the system would be met. By establishing a trust fund with its own dedicated sources of funding that would increase in step with the use of the system, timely and long-term commitments to capacity increases could be assured.

PURPOSE OF THE TRUST FUND: CAPITAL ACCOUNT VERSUS USER FINANCING

The trust fund has two principal functions. First, it serves to keep track of excise taxes paid by aviation system users that are specifically earmarked for spending on aviation programs. Second, it accounts for how those earmarked tax revenues are spent. Much of the controversy about the trust fund and the accumulation of a surplus in it concerns how the trust fund tax revenue is intended to be spent. Disagreements over the proper uses of excise tax revenue lead to different interpretations of the fund's cash balance and accumulated surplus.

1. The general fund receives government receipts that are not earmarked for specific purposes and is charged with expenditures from those receipts.

From the start, two views of the trust fund have developed based on differing opinions about the proper use of the fund's receipts. The first view, which may have predominated in recent Congressional action and trust fund accounting, is that the fund is primarily a capital account. As a capital fund, its main purpose would be to assure stable and adequate investment in aviation capacity. Aviation taxes paid by users of the system would be accumulated in this fund and form the source of replacement capital and new investment to meet the current and future capacity needs of these users. Any uses of trust fund resources beyond capital replacement and expansion would be secondary and would be made only after the capital needs of the system have been met.

Alternatively, the trust fund could be considered a part of a user financing system, in which users finance both the capital and operating costs of the aviation system. This second view, reflected in proposals by successive administrations since 1971, sees the trust fund as a broader mechanism for financing all aviation programs. In this view of the trust fund as a full financing system, the fund should pay for all the costs of the system attributable to private users.

Current trust fund accounting reflects the trust fund as neither a pure capital account nor a true user-pay account, but rather as a hybrid of the two. At various times since 1971, the fund has been more nearly a pure capital account. At other times, it has come closer to being a full user-pay system. In order to preserve aviation tax revenue for financing the capital needs of the aviation system, the Congress has enacted various provisions that restrict the amount that can be spent from the fund for Federal Aviation Administration (FAA) operations. As a result, the operation and maintenance of the aviation system have been primarily financed by the general fund. These provisions reflect the Congress' view that the trust fund and aviation excise taxes are primarily sources of capital investment and research spending.

Since aviation excise tax rates have not been tied to aviation spending, restraints on such spending can produce excess aviation tax revenue that can be indirectly used to finance spending for other programs in the federal budget. The trust fund is credited with this aviation excise tax revenue and earns interest on the unspent balance in the fund which, in effect, is loaned to the general fund to finance

other programs, including FAA operations. Those who view the trust fund as primarily a capital account see this as an incentive for the FAA to limit capital spending in order to use, in effect, aviation tax revenue to finance FAA operations; they regard this as an unwarranted hoarding of funds that were collected to finance capital requirements. They view the answer to congestion in the aviation system and to the growing uncommitted balance in the trust fund as relatively simple and straightforward: stop hoarding trust fund income to finance other programs, and increase capital spending from the fund.

The FAA and the various administrations since 1970 have taken a different view of the trust fund. They see excise taxes as broad user taxes that should be used to cover not only the capital requirements of the aviation system but its operating and maintenance costs as well. In this view, no hoarding is taking place. The tax revenue collected each year is either spent for trust fund programs and debited to the trust fund, or is available to support other federal spending. This other spending includes the operation and maintenance expenditures made by the FAA, so whether it is accounted for as having been spent or not, the effect is still the same. Rather than reduce the accumulated surplus in the trust fund only through higher capital spending, they would prefer to see the method of accounting for aviation spending altered so that all user-imposed costs are fully accounted for by a user-financed trust fund.

LEGISLATIVE HISTORY OF THE TRUST FUND

The growth and development of the aviation system in the last 30 years have been marked by periods of recurring congestion. The Congress has periodically responded to these pressures on the aviation system with legislation designed to enhance capacity and air safety through new or reorganized aviation programs and policies, and by increased funding for the aviation infrastructure.

The Federal Aviation Act of 1958 was a response, in part, to the fact that growth in air transportation proceeded without commensurate and orderly growth in airway and airport capacity, or in centralized control and expansion of the air traffic control system. This act centralized federal responsibility for aviation safety and control

over the airway system in the Federal Aviation Administration (then Agency).

The Airport and Airway Development and Revenue Acts of 1970

The rapid introduction of jet aircraft in the 1960s, in conjunction with sporadic funding for improving airport and airway capacity, led to further congestion in the airport system and concern for the ability of the airway system to handle growth while expanding and modernizing its control facilities. The Airport and Airway Development Act of 1970 (Title I of Public Law 91-258) authorized an expanded and long-term commitment to airport development and to capital improvements in the air navigation and traffic control system. This act authorized minimum levels over a five-year period for airport development grants and for airway facilities expenditures.

The Airport and Airway Revenue Act of 1970 (Title II of Public Law 91-258) was enacted in conjunction with the Airport and Airway Development Act. This revenue act established both a system of aviation excise taxes to finance spending on aviation programs, and the Airport and Airway Trust Fund in the Treasury into which these taxes were to be deposited. Through these excise taxes, aviation spending was to be directly linked to the level of use the system received. As use of the system increased over time, so would tax revenue in the trust fund. In addition to airport grants and development of airway facilities, the trust fund was also authorized to finance research and development as well as spending for FAA operations. Linking federal aviation spending to aviation taxes was a principal purpose of the act. Those who benefited from aviation programs were to bear most of the burden for their financing. In return, they would be assured that funds would be available to finance increases in capacity.

Just before the Airport and Airway Revenue Act of 1970 was enacted, aviation-related excise taxes consisted of a 5 percent tax on passenger tickets for domestic flights, a tax on aviation gasoline of 2 cents per gallon, and taxes of 10 cents per pound on aircraft inner tubes and 5 cents per pound on aircraft tires; the gasoline, tire, and tube taxes were deposited into the Highway Trust Fund. The Airport and Airway Revenue Act increased the gasoline and ticket taxes and established additional taxes so that all users of the aviation system

paid a portion of its costs. The resulting aviation excise taxes were: an 8 percent tax on the value of domestic passenger tickets; a new departure tax of \$3 per person on international flights; a new 5 percent waybill tax on the value of air cargo shipments; a 7 cents per gallon tax on gasoline used by general (noncommercial) aviation and a new 7 cents per gallon tax on other fuels (jet fuel, or kerosene) used by general aviation; a new annual aircraft registration tax of \$25 plus 2 cents per pound for each pound over 2,500 for piston-powered aircraft and 3.5 cents per pound for turbine-powered aircraft; and the 10 cents per pound inner tube tax and 5 cents per pound tire tax. These new taxes and higher rates on existing taxes were authorized through fiscal year 1980. Table 1 shows tax rates from the start of the trust fund through those projected for 1990.

These new or increased excise taxes were intended to charge all users of the airways and airports in relation to their use of these systems. General aviation users paid the fuel, registration, and tire and tube taxes. Air carriers, and through them passengers and air freight shippers, paid the ticket, departure, waybill, registration, and tire and tube taxes. In addition, the Department of Transportation was instructed to study the revenue contribution of the different classes of users of the aviation system and to determine the appropriate share of aviation funding that each should bear.

The Congress and the Administration came into conflict in the first year that the new system was in use. While the Congress in enacting the trust fund considered it to be primarily a capital fund, the Nixon Administration from the start viewed it as a user-pay system. Since the fiscal year 1971 appropriation request had already been made before the 1970 acts were passed, the Administration first proposed spending under these laws in a supplemental appropriation request for fiscal year 1971. In that request and in its fiscal year 1972 appropriation request, the Administration asked for much less than the \$530 million minimum amount authorized in the law (\$280 million for airport grants and \$250 million for airway facilities). In addition, the 1972 budget request proposed that the balance in the trust fund be used to finance the FAA's operations cost. The result would have been funding of 70 percent of FAA operations from the trust fund--about \$700 million, or more than the total spending for

TABLE 1. AVIATION EXCISE TAX RATES: 1970-1990
(By fiscal year)

	Passenger Ticket Tax (Percent)	Inter- national Departure Tax (Dollars)	Freight Waybill Tax (Percent)	Aviation Gasoline Tax (Cents per gallon)	Aviation Jet Fuel Tax (Cents per gallon)	Aviation Tires Tax (Cents per pound)	Aviation Tubes Tax (Cents per pound)	Aircraft Regis- tration Tax (Dollars)
1970	5	a	a	2	a	5	10	a
1971-1980	8	3	5	7	7	5	10	25 + (.02/lb. or .03/lb.) ^b
1981-1982	5	c	c	4	c	4.875	10	d
1983-1989	8	3	5	12	14	e	e	0
1990 ^f	4	3	2.5	6	7	0	0	0

SOURCE: Congressional Budget Office, from legislation.

- a. No such tax existed.
- b. The tax is \$25.00 per aircraft, plus 2 cents per pound for each pound over 2,500 pounds for non-turbine-powered aircraft or 3.5 cents per pound for turbine-powered aircraft.
- c. Tax lapsed.
- d. Tax lapsed and was not renewed.
- e. Tax was eliminated as it applied to aircraft, in 1984.
- f. Rates projected to take effect on January 1, 1990.

capital programs of the aviation system. The Congress felt that this was contrary to the intent of the 1970 law, and that the Administration was proposing to use aviation taxes not to build capacity in the airport and airway systems but to drain the funds away to cover current operations. As a result, an amendment to the Airport and Airway Development Act of 1970 was passed in November 1971 (Public Law 92-174), eliminating the provision permitting the use of the trust fund to finance FAA operations.²

The ramifications of the 1971 amendment were far reaching. First, it significantly changed the nature of the trust fund. While the Congress had intended the new excise taxes to finance capital expansion of the airport and airway systems, it had also intended that private-sector users would pay for the federal services provided them to

2. *Airport and Airway Development Act--Amendment*, H. Rept. 459, 92:1 (1971).

the extent funds were available after capacity needs had been met. In effect, the trust fund was to have been a capital account except when excess funds were available; in those instances, the trust fund could be more of a user-pay system. This amendment broke the link between the excise tax payments and the coverage, if only partial, of the costs of all aviation services, and established the trust fund as a capital-only account. Second, it was the first indication that the new system of aviation funding would not fulfill its intended goal of freeing the aviation budget from the general budgetary constraints of the government.

The Airport and Airway Development Act Amendments of 1976

The Airport and Airway Development Act Amendments of 1976 (Public Law 94-353) reauthorized trust fund spending for aviation programs for the 1976-1980 period.³ In this reauthorization, the Congress noted that the expanded airport and airway programs had served their purposes well, but that continued growth in air traffic and concerns about congestion and delays required reauthorization and continued expansion of aviation programs. This legislation made various changes to the airport grant program and nearly doubled its annual authorizations. Minimum authorizations for airway facilities remained constant at \$250 million a year through 1980.

Of particular importance in this legislation was authorization to finance, once again, some of the operations and maintenance expense of the airway system from the trust fund. While leery of a repetition of what it perceived as misuse of the trust fund in 1971, the Congress acknowledged that aviation excise taxes were intended to be user fees that would not only fund capital expansion of the aviation system, but would also operate and maintain it.⁴ Therefore, trust fund financing for the maintenance of air navigation facilities was authorized but a cap was placed on appropriations for this purpose, starting at \$250 million in 1977 and rising to \$325 million in 1980. In addition, a penalty clause was enacted that reduced these maximum levels in proportion to any shortfall of airport grants below the authorized mini-

3. The Airport and Airway Revenue Act of 1970 authorized the aviation excise taxes through fiscal year 1980.

4. *Airport and Airway Development Act Amendments of 1976*, H. Rept. 594, 94:1 (1975).

mum amounts. This act, therefore, moved the trust fund away from a purely capital account to a hybrid system of partial user financing of total system costs.

At the end of 1980, the new and increased taxes imposed by the Airport and Airway Development Act of 1970 expired, as did the authorization to transfer the revenue from these taxes to the trust fund.⁵ Spending from the trust fund continued, however, and was charged against the accumulated surplus of the past six years.

The Airport and Airway Improvement Act of 1982

The Airport and Airway Improvement Act of 1982 (Title V of Public Law 97-248) reaffirmed the need for an expanded aviation capital program, renewed and increased aviation user fees, and made changes in trust fund spending provisions. The law took particular note of the need to modernize the air traffic control system, and of the fact that authorizations for airway facilities had not changed in a decade. The five years of authorizations in the act for facilities and equipment constituted the initial funding for the FAA's long-term National Airspace System Plan (NAS Plan), a comprehensive program designed to modernize the airway system.

The 8 percent domestic passenger ticket tax, the \$3 international departure tax, and the 5 percent waybill tax were reimposed at their old rates. The aircraft registration tax was not renewed, however, and while deposit of the tire and tube taxes into the Airport and Airway Trust Fund, instead of the Highway Trust Fund, was reinstated, these taxes were eliminated as they applied to aircraft in 1984 (Public Law 97-474).

The major change in excise taxes was to increase the taxes on gasoline and jet fuel paid by general aviation, which encompasses private, noncommercial users of the aviation system, including business, corporate, and pleasure fliers. Since general aviation would no longer be paying the registration tax, and since general aviation's share of

5. Aviation excise taxes existing before the 1970 act did not expire (see Table 1). Proceeds from the ticket tax were deposited in the general fund and proceeds from the gasoline, tire, and tube taxes were deposited in the Highway Trust Fund during 1981 and 1982.

total annual aviation taxes was proportionately less than its use of the aviation system, these taxes were raised substantially: to 12 cents a gallon for gasoline and 14 cents a gallon on other fuels.⁶ All of the aviation taxes were reauthorized through the end of calendar year 1987.

Trust fund financing for aviation programs was reauthorized through fiscal year 1987. These programs consisted of the airport grants-in-aid program; expenditures on the national airway system under the NAS Plan for facilities and equipment, and for research, engineering, and development; transfers to the National Oceanic and Atmospheric Administration (NOAA) to fund the aviation weather services program; and funding to cover a portion of FAA operating costs.

This act continued the intermediate approach of a partial user-pay system adopted in the 1976 act by continuing the restrictions on the amount of operations spending that could be financed from the trust fund. While cap and penalty provisions were both retained, the formula governing each was changed. The new cap was set at a multiple of the actual amount made available for obligation each year for airport grants. The penalty clause reduced this cap amount by twice the difference between authorizations for facilities and equipment spending and the actual appropriations for the program. The intent was, once again, to permit spending from the trust fund for operations only after the authorizations for capital spending had been funded, and to prevent unappropriated funds from being used for operations spending.

The Airport and Airway Safety and Capacity Expansion Act of 1987

The Airport and Airway Safety and Capacity Expansion Act of 1987 (Public Law 100-223) reauthorized spending for aviation programs and extended the excise taxes to finance them. Air travel had surged in the decade since airline deregulation, continuing and increasing pressure on the capacity in the system. At the same time, the modernization and expansion of the airway system foreseen in the 1982 act had lagged, primarily because of technical difficulties in the programs. In the debate over the 1987 act, congestion in the aviation sys-

6. *Airport and Airway System Development Act of 1982*, S. Rept. 494, 97:2 (1982).

tem and delays in capital expansion were also attributed to constraints during the last few years on trust fund spending imposed for deficit reduction purposes. These lags in capital spending, as well as the restrictions on spending from the trust fund for FAA operations, had resulted in continued growth in the uncommitted balance in the trust fund despite increasing demands for higher spending.

In the 1987 act, therefore, both airport and airway programs received substantial increases in their authorization levels, while aviation taxes were extended at their current rates. The intent was to reduce slowly the accumulated surplus in the trust fund by increasing capital spending without increasing tax rates. In addition, the cap and penalty clauses were once again changed. The new cap on annual operations appropriations from the trust fund is set at 50 percent of the total amounts made available in each year for airport grants-in-aid, facilities and equipment, and research, engineering, and development. This annual maximum amount is reduced by twice the amount by which the actual amounts made available for these programs fall short of levels specified in the law.

The cap and penalty provisions in the 1976, 1982, and 1987 acts were intended to permit the trust fund to be more than a purely capital account and to provide for partial user support for the operating costs of the aviation system. At the same time, they were also designed to remove any incentive to reduce capital spending on aviation in order to finance more operations spending from aviation tax revenue. While these provisions have prevented greater financing of FAA operations from the trust fund and thus helped to increase the uncommitted balance in the trust fund and reduce the degree to which users pay for the system, they have not resulted in the full appropriation of authorized capital spending levels. Primarily because of program constraints, these provisions have merely altered the accounting for aviation spending, forcing the general fund to finance more of these expenditures.

In addition, there still remains an incentive to limit capital spending for aviation programs. Given the annual level of excise tax revenue from aviation, each dollar of aviation spending greater than these tax revenues must be funded by general revenues. Therefore, regardless of the actual accounting for aviation spending, each dollar

reduction in spending on aviation either reduces the need for the general fund to finance aviation spending, or produces a trust fund surplus from which the Treasury can borrow to cover nonaviation expenditures.

In recognition of this fact, the Congress created a new provision in the 1987 act. This provision triggers reductions in the aviation excise tax rates if aviation capital spending falls below certain levels during 1988 and 1989. If the sum of the obligation limits in fiscal years 1988 and 1989 for airport grants, and the appropriations for fiscal years 1988 and 1989 for facilities and equipment, and for research, engineering, and development, is less than 85 percent of the total amounts authorized for these programs, then in calendar year 1990 the domestic ticket tax, the waybill tax, and the general aviation fuel tax rates will be reduced by 50 percent, while the international departure tax will remain unchanged. With this provision, restraints on spending for aviation capital programs become counterproductive since they would lose more revenue than they would save in outlays.

FINANCIAL HISTORY OF THE TRUST FUND

Table 2 shows trust fund revenue and outlays by source, and the resulting balances since 1971. Except for the 1971-1973 and the 1981-1982 periods, these sources and uses of funds have changed very little. The levels of spending and revenue, however, and the trust fund balance and surplus, have varied more significantly.

In the 1971-1973 period, revenue and outlays were affected by several provisions of the Airport and Airway Revenue Act of 1970. On the income side, the unexpended balances from prior-year appropriations for aviation programs were transferred to the fund in 1971 and 1972. In addition, revenues from the general fund were transferred to the trust fund in 1972 and 1973 under provisions of the act that authorized transfers to cover any shortfall between tax revenue and expenditures from the fund and to maintain required reserves.⁷ Last, in-

7. These reserves were required by a provision of P.L. 92-174 stipulating that funds remain available in the trust fund in sufficient amounts to cover the minimum authorizations for airport grants and for airway capital expenditures.

TABLE 2. AIRPORT AND AIRWAY TRUST FUND
(By fiscal year, in millions of dollars)

	1971	1972	1973	1974	1975	1976	TQ	1977
Trust Fund Receipts								
Passenger Ticket Tax	453	518	609	652	779	777	225	1,007
Waybill Tax	27	27	36	43	54	42	14	51
Fuel Tax	36	38	47	67	54	52	14	56
International Departure Tax	26	44	47	60	55	47	16	57
Aircraft Use Tax	19	20	18	21	20	21	8	22
Aircraft Tires and Tubes Tax	3	3	2	1	1	1	0	1
Refunds	-2	-1	-2	-2	-1	-2	-1	-2
Transfers from General Fund	621	902	73					
Total, Receipts ^a	1,184	1,551	832	840	962	938	277	1,191
Trust Fund Outlays								
Airport Grants-in-Aid	61	105	232	243	292	269	26	335
Facilities and Equipment	122	224	322	207	223	204	48	197
Research, Engineering, Development	26	58	67	68	64	74	18	70
Trust Fund Share of FAA Operations	78	1,000	77	3	c	1	c	250
Other ^b	c	1	1	c	0	0	0	0
Total, Outlays	287	1,389	699	521	579	547	92	853
Trust Fund Receipts	1,184	1,551	832	840	962	938	277	1,191
Trust Fund Outlays	287	1,389	699	521	579	547	92	853
Net Income before Interest	897	162	132	319	383	391	185	338
Interest on Investments	0	0	0	28	96	146	1	194
Change in Cash	897	162	132	347	479	537	186	532
Unexpended Balance, Start of Year	0	897	1,058	1,187 ^e	1,534	2,013	2,550	2,736
Change in Cash	897	162	132	347	479	537	186	532
Unexpended Balance, End of Year	897	1,058	1,191	1,534	2,013	2,550	2,736	3,268
Commitments Against Unexpended Balance	1,290	1,519	1,821	1,611	1,102	862	1,302	1,466
Uncommitted Balance, End of Year	-393	-461	-630	-76	912	1,688	1,434	1,801
General Fund Share of FAA Spending ^d	1,259	233	1,150	1,334	1,432	1,586	390	1,516

SOURCE: Congressional Budget Office and the Appendix to the Budget of the United States.

- a. Aviation excise tax revenues of \$1,180 million in 1981 and \$1,036 million in 1982 were not credited to the trust fund, but remained in the general fund.
- b. Other includes spending for the Aviation Advisory Commission from 1971 to 1974, and transfers to the National Oceanic and Atmospheric Administration to fund the aviation weather services program beginning in 1984.

(Continued)

TABLE 2. Continued

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Trust Fund Receipts										
1,109	1,284	1,601	19	130	1,889	2,181	2,509	2,402	2,700	2,815
65	81	92	-2	0	118	134	134	137	159	168
50	64	70	c	4	95	105	105	112	115	117
77	72	92	9	0	62	80	108	93	91	95
26	26	21	1	0	0	0	0	0	0	0
1	1	1	0	c	1	c	0	0	0	0
-2	-2	-3	-4	-1	c	-2	-4	-8	-6	-6
1,326	1,526	1,874	21	133	2,165	2,499	2,851	2,736	3,060	3,189
Trust Fund Outlays										
562	556	590	469	339	453	694	789	853	917	825
211	188	230	252	292	248	268	425	758	892	1,043
67	70	78	89	72	71	146	262	293	170	170
275	300	325	495	810	1,020	257	1,110	435	622	830
0	0	0	0	0	0	27	27	27	29	28
1,115	1,114	1,224	1,306	1,512	1,792	1,392	2,613	2,365	2,631	2,896
1,326	1,526	1,874	21	133	2,165	2,499	2,851	2,736	3,060	3,189
1,115	1,114	1,224	1,306	1,512	1,792	1,392	2,613	2,365	2,631	2,896
211	412	650	-1,284	-1,379	373	1,108	238	371	429	293
219	282	400	561	542	533	546	746	829	880	893
430	694	1,050	-724	-837	906	1,653	985	1,200	1,310	1,185
3,268	3,698	4,392	5,442	4,719	3,881	4,787	6,441	7,426	8,625	9,935
430	694	1,050	-724	-837	906	1,653	985	1,200	1,310	1,185
3,698	4,392	5,442	4,719	3,881	4,787	6,441	7,426	8,625	9,935	11,120
1,413	1,598	1,640	1,705	1,793	2,795	3,431	4,558	4,750	4,376	5,285 ^f
2,284	2,794	3,803	3,014	2,088	1,992	3,010	2,868	3,875	5,559	5,835 ^f
1,663	1,736	1,913	1,853	1,380	1,612	2,454	1,681	2,334	2,293	2,324

c. Less than \$500,000.

d. The general fund share of FAA spending is not part of the trust fund, but is included here for comparison with trust fund outlays.

e. The beginning unexpended balance in 1974 is \$4 million less than the end-of-year unexpended balance in 1973 because of an accounting adjustment.

f. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

terest was not paid by the Treasury on the cash balance in the trust fund in this period, but began in 1974 after requirements in the 1970 act were met.⁸

On the spending side, the trust fund financed only a portion of the expenditures for aviation programs in 1971; most of those expenditures were financed from old, pre-trust-fund accounts in the general fund. In 1972, all of the operations cost of the FAA was paid from trust fund balances. The Congress subsequently enacted an appropriation to replace these funds in the trust fund and eliminated the authorization for such financing of FAA operations after 1972.

In 1981 and 1982, trust fund revenue was reduced by the lapse of authorization to transfer aviation excise tax revenue from the general fund into the trust fund and by the lapse of some of the taxes as well. The aviation taxes that existed before the trust fund were still collected, but they were not credited to the trust fund. These taxes consisted of a 5 percent tax on passenger tickets, a 4 cents per gallon general aviation gasoline tax, a 4.875 cents per pound tax on aircraft tires, and a 10 cents per pound tax on aircraft tubes.⁹ Revenues from these taxes were \$1.2 billion in 1981 and \$1.0 billion in 1982. Revenues from the ticket tax remained in the general fund, while the gas, tire, and tube taxes were credited to the Highway Trust Fund. During this period, trust fund income consisted almost exclusively of interest income; therefore, all of the percentages discussed below are calculated by excluding these two years. After excise taxes and trust fund transfers were reauthorized in 1982, trust fund income in 1983 once again fully reflected aviation excise tax revenue.

Points of Interest

A look at Table 2 reveals five points of particular interest. First, on the revenue side, the large proportion of trust fund tax revenue provided by domestic airline passengers is quite apparent. The tax on

8. Section 208(e)(3) of P.L. 91-258 required investment of trust fund balances in interest-bearing securities of the federal government or securities guaranteed by the federal government. This investment was not to occur, however, until the fiscal year after the first fiscal year in which tax receipts exceeded 80 percent of trust fund outlays. This condition was met in 1973.

9. The gasoline tax was 2 cents per gallon and the tire tax was 5 cents per pound in 1970.

tickets produces most of the trust fund's tax revenues, accounting for about 85 percent of annual collections since 1971 and 88 percent for each of the last five years. The waybill tax, fuel taxes, and departure tax have averaged only 5 percent, 4.5 percent, and 4 percent, respectively, of total tax revenue to the fund over the entire period.

Second, interest credited to the trust fund by the Treasury has been a significant and growing portion of total trust fund income. Since 1974, these receipts have averaged over 19 percent of total trust fund income. Over the last five years, this percentage has grown to 21 percent.

The importance of interest income can be seen by comparing the total interest credited to the trust fund since 1974 with the 1988 cash balance. The accumulated interest income at the end of 1988 was \$6.9 billion, while the cash balance was \$11.1 billion. Excluding interest income, the cash balance would drop to \$4.2 billion, which is less than the \$5.3 billion in commitments against the trust fund at the end of 1988. In other words, the trust fund would have had unfunded authorizations, not an accumulated surplus, at the end of 1988 if interest income had not been credited to the account over the last 15 years.

Third, on the outlay side, changes in capital spending for airports and the airway system have come in spurts with each new authorization, but have been fairly constant otherwise. From 1972 to 1976, airport spending averaged about \$230 million a year, while facilities and equipment, and research, engineering, and development, combined, averaged about \$300 million. Following the Airport and Airway Development Act Amendments of 1976, outlays for airport grants jumped to an annual average of \$475 million from 1977 to 1982, while spending for the airway system remained unchanged at an average of just over \$300 million a year. The Airport and Airway Improvement Act of 1982 authorized large increases in spending for the airway system as the initial funding for the National Airspace System Plan. These increases have been only partially reflected in outlays since then because of delays in these programs. Nevertheless, annual average spending for the airway system has risen to over \$700 million a year during the 1983-1987 period, and to over \$1.2 billion in 1988. Outlays for airport grants have continued to rise in step with the greater contract authority provided in the 1982 and 1987 acts, but they have been restrained by annual obligation limits. Outlays for

airport grants have averaged nearly \$750 million during the 1983-1987 period and were more than \$800 million in 1988.

Fourth, trust fund outlays for FAA operations have varied greatly because of legislative provisions.¹⁰ Essentially no financing from the trust fund occurred in the 1973 to 1976 period when this spending was prohibited and all operations costs of the FAA came from the general fund. During the 1977-1980 period, about 15 percent of such spending was financed from the trust fund. In the period since 1980, trust fund outlays have fluctuated because of the cap and penalty provisions. The resulting trust fund share of total operations outlays has ranged from a low of 10 percent in 1984 to highs of 41 percent in 1983 and 1985, and has averaged 27 percent during this period.

Finally, the unexpended and the uncommitted balances in the fund have grown nearly continuously from the beginning of the trust fund. The unexpended or cash balance grew steadily until 1981 when the flow of tax revenue into the fund was temporarily interrupted. After 1982, the cash balance again grew steadily through 1988, exceeding \$11 billion. While interest income, as noted above, has been substantial and has contributed greatly to the current large cash balance, tax revenue by itself exceeded outlays from the fund for aviation programs in each year except 1981 and 1982. Therefore, even without interest income, the fund would have had a substantial cash balance, though it would have been about 20 percent short of covering all commitments for aviation programs (\$4.2 billion versus commitments of \$5.3 billion).

The unexpended balance is larger than the cumulative surplus in the fund because it does not net out committed funds. These are funds that have been appropriated but not yet expended for airway programs (for facilities and equipment, and for research, engineering, and development) or funds that have been authorized for airport grants-in-aid (a program with direct spending authority), but not yet made available for obligation or expended. The cash balance less these commitments is the uncommitted balance. This amount represents the accumulated surplus or deficit in the trust fund account.

10. While FAA headquarters administration spending has been funded separately from FAA operations since 1983, it is combined with FAA operations spending for the purposes of this study.

The uncommitted balance exhibits more variability than the cash balance because of the interaction of trust fund revenues, authorizations, appropriations, and outlays. This balance began to grow substantially in 1975 and reached nearly \$4 billion by 1980, after which the deposit of tax revenue in the fund was interrupted. This funding hiatus nearly halved the uncommitted balance by 1983 before it began growing again. By 1988, it had reached more than \$5.8 billion, or more than half the cash balance in the trust fund.

Current Status of the Trust Fund

At the end of 1988, the Airport and Airway Trust Fund had a cash balance of over \$11 billion, net income excluding interest earnings for the year of almost \$300 million, interest income of nearly \$900 million, and an accumulated surplus of over \$5.8 billion. While all of these amounts have been growing in recent years, it is the growth in the uncommitted balance or accumulated surplus that has generated the most concern and controversy in the debates over aviation programs and their financing.

The size of the uncommitted balance reflects both revenue and outlay effects. On the revenue side, the uncommitted balance has been reduced by the interruption of the flow of aviation taxes into the fund in 1981 and 1982. Those tax revenues totaled \$2.2 billion for the two years. The balance has been increased by the interest income generated by the large cash balances that have grown as a result of constraints and restrictions on spending from the trust fund. In addition, the interest rate used for computing interest credited to the fund by the Treasury is calculated by an obsolete method that has overstated interest income in recent years.¹¹

On the outlay side, because of both program and budgetary restraints, expenditures for airports and the modernization of the air traffic control system have fallen short of authorizations; and, partly

11. This interest rate, by law, is an average coupon rate for all outstanding government securities rather than the market rate for current borrowing that is used for other trust funds such as Social Security and Medicare. This rate tends to lag behind changes in market rates so that, in periods of falling rates, as in some recent years, both the interest rate and the interest income earned by the trust fund are overstated. Conversely, in periods of rising rates, the interest rate and the interest income would tend to be understated.

as a result, spending from the trust fund to cover FAA operating costs has been reduced.

What all of this means for the trust fund and future funding of aviation programs depends, to some extent, on one's prior assumptions. If one views the trust fund as a capital-only funding mechanism, the accumulated surplus could be seen as a hoarding of income and as evidence that insufficient capital spending is taking place given the current level of tax revenue. Conversely, the uncommitted balance could be seen as an indicator that the trust fund is overfunded and that, given the current levels of capital spending, the taxes supporting it are too high. If one views the trust fund as a full user-pay system, the accumulated surplus could be seen as evidence that the trust fund is capable of supporting more of the costs of the aviation system than it now finances. Finally, if one views the trust fund as a partial funding, hybrid system, then all of these factors taken together could be viewed as indicators of a healthy trust fund--one that has more than adequate resources to support the programs it currently finances.

CHAPTER II

AN ANALYSIS OF THE ACCUMULATED SURPLUS IN THE TRUST FUND

This chapter analyzes the current trust fund uncommitted balance and calculates alternative balances that incorporate capital-only funding and full private-user funding of aviation programs through the trust fund.

WHO PAYS FOR WHAT?

Since the trust fund is only an accounting device, its receipts, outlays, and balances may differ markedly from the taxation and spending that actually took place or from the accounting that would have been made if different purposes had been assigned to the trust fund's receipts. By comparing tax revenue paid by private-sector users of the aviation system with estimates of their share of the system's costs, one can determine whether the private sector is financing the aviation services it receives or whether it is receiving a subsidy from general taxpayers. Quite apart from this question, however, is the determination of what spending has actually been charged against trust fund receipts and what the trust fund balances would have been under different accounting criteria for aviation system spending.

The calculations in this chapter show that, while aviation excise tax revenues have been more than sufficient to finance the capital needs of the aviation system, they have been insufficient to finance the trust fund as a full user-pay system. General taxpayers have paid more than the public share of system use and, therefore, private-sector users of the aviation system have been subsidized by general taxpayers since the beginning of the trust fund in 1971. Since the trust fund accounts do not include either the full Federal Aviation Administration spending attributable to private-sector use of the aviation system or just the capital share of FAA spending, the current trust fund balances are misleading as indicators of private-sector support of

capital, operating, or total spending by the FAA on the aviation system.

Estimates of Public Versus Private Use

Use of the aviation system can be separated into two broad categories: public-sector and private-sector use. Public-sector use of the system includes mainly military and civil government flying, together with services provided to nonaviators (mainly weather information). In addition, the FAA makes expenditures in the public interest for safety regulation of the aviation industry. Private-sector use of the system is principally by commercial and general aviation. Commercial aviation includes domestic, international, freight, and commuter air carriers. General aviation includes air taxis, rotorcraft, and planes flown by business, corporate, and pleasure fliers.

The FAA has periodically undertaken studies to estimate the allocation of the FAA costs of building, operating, and maintaining the airport and airway systems. The original study was done at the behest of the Congress as requested in the Airport and Airway Development and Revenue Act of 1970.¹ A new cost allocation study was undertaken in 1978.² This was updated and refined in 1985.³ The 1978 and 1985 study results were roughly the same; since the 1985 study broke down the cost allocation into finer detail, and was based on the most recent programs of the FAA, the results of that study are reported here and have been used in allocating FAA costs.

The cost allocation study allocated all of FAA's costs based on estimates of the system's use by both public- and private-sector users of

1. Department of Transportation, *Airport and Airway Cost Allocation Study: Determination, Allocation and Recovery of System Costs* (1973).
2. John M. Rodgers, *Financing the Airport and Airway System: Cost Allocation and Recovery*, FAA-AVP-78-14 (1978).
3. The 1985 study consisted of six volumes and a summary. The discussion here is based upon the work in the summary and the first three volumes: Daniel E. Taylor, *Airport and Airway Costs: Allocation and Recovery in the 1980s*, FAA-APO-87-7 (February 1987); Department of Transportation, *Allocation of Federal Airport and Airway Costs for FY 1985*, FAA-APO-87-11 (December 1986); Department of Transportation, *Allocation of Future Federal Airport and Airway Costs*, FAA-APO-87-12 (December 1986); and Department of Transportation, *Airport and Airway Costs Allocated to the Public Sector 1985-1997*, FAA-APO-87-13 (December 1986).

the airport and airway systems, the variable costs of each component of the aviation system, and allocations of joint and indirect costs. The 1985 study included two versions of two basic allocations--namely, an allocation where all users were assigned a portion of joint system costs, and an allocation where general aviation paid none of the joint costs but only the costs avoidable by the FAA if general aviation's use of individual parts of the system were to be discontinued (called the minimum general aviation allocation). One version of each of these allocations assigned FAA expenditures for regulation of the industry to users, and the other version allocated all of these expenditures to the public interest.

The allocation of concern in this study is the split between the public and private sectors, not the allocation within the private sector. The 1985 study estimated current and future (through 1997) public-sector shares of FAA spending based on assigning FAA regulatory costs either to system users or to the public interest (and therefore the public sector). The projections ranged from 9.9 percent to 18.8 percent. The 1978 study did not do alternative allocations of the regulatory costs but assigned them to the public interest. In that study, the cost allocation to the public interest was found to be 14.5 percent in 1978.

In performing the analysis in this study, 15 percent of FAA expenditures were allocated to the public. This percentage was chosen since valid arguments can be made for assigning regulatory cost either to users or to the public interest. If these costs were split equally between users and the public interest, the public-sector share would be about 16 percent in 1985 and decline to about 12.5 percent in 1997, based on the projections in the 1985 study. This finding, in combination with the 1978 result of 14.5 percent for the public interest, suggests that 15 percent might rarely be a slight underestimate of public-interest costs. Over the historical periods and the projection period used in this study, however, it would more likely be an overestimate of the public interest allocation. Therefore, 85 percent would tend to be a conservative estimate of the private-sector share of total FAA spending. Under a full user-pay trust fund system, wherein private-sector users of the aviation system shoulder the full costs they impose on the

system, 85 percent of FAA spending would have to come from user aviation excise tax revenues.⁴

Federal Aviation System Expenditures

Current FAA spending for aviation includes airport grants-in-aid; capital expenditures on the airway system for facilities and equipment, and for research, engineering, and development; and FAA operations expenditures for operating and maintaining the airway system. All expenditures in the grants-in-aid, facilities and equipment, and research, engineering, and development programs are charged to private-sector users since funding for these programs is from the trust fund, but only a portion of FAA operations spending is paid from the trust fund.

Since 1980, the trust fund share of FAA operations spending has averaged 25 percent. For private-sector users to support 85 percent of total FAA spending, a much higher percentage of the operations account would have to be financed by the trust fund. In 1988, for example, 73 percent of FAA operations spending would have had to be paid from the trust fund to yield an overall trust fund share of FAA spending of 85 percent. Since the actual percentage for 1988 was 26 percent, the additional 47 percent of operations spending coming from the general fund can be characterized from a user-pay perspective as a general fund subsidy of the trust fund.

Other Expenditures

General fund financing of federal air transportation programs is not limited to these expenditures by the FAA. The Department of Transportation retains some economic regulation of air carriers, provides subsidies for air service to some small communities, and maintains consumer protection regulations.⁵ The National Transportation Safety Board (NTSB) investigates both commercial and general avia-

4. The 85 percent share applies to budget authority (obligation limits for airport grants) and not outlays.

5. These regulatory responsibilities were performed by the Civil Aeronautics Board until its abolishment in 1985.

tion accidents. The National Aeronautics and Space Administration (NASA) conducts aviation research and development programs. In 1988, subsidies to air carriers totaled \$26 million, outlays for the NTSB were \$24 million, and outlays for the aviation portion of NASA's budget were \$644 million.

Users of the nation's aviation system benefit from these non-FAA programs. Yet the trust fund has never covered any of them, nor is any taxation of aviation users specifically designed to recoup these costs. While this study is confined to an examination of FAA spending, an analysis of these other programs would be necessary to determine the degree to which private-sector users pay their share of the cost of all the nation's air transportation programs.

BASE-CASE RECALCULATION OF TRUST FUND BALANCES

In order to clarify the accounting for all tax revenue paid by private-sector users of the aviation system and the spending that revenue has supported, this study uses a base case for analyzing the trust fund. This base case is constructed from actual trust fund data as detailed in Table 2 in Chapter I with some adjustments to both revenues and outlays. The base case figures shown in Table 3 thus represent an abbreviated version of the trust fund programs in Table 2, with the following modifications.

Aviation excise taxes that were not deposited in the trust fund in 1981 and 1982 are included in tax revenue for those years. By including these tax revenues as income to the trust fund, the cash balances in the fund are increased by the same amounts, and therefore the interest income to the fund must be increased to reflect these higher cash balances. The line for interest on investments includes these higher interest earnings beginning in 1981 and continuing to the present. The additional tax revenue in these two years totals \$2.2 billion, and the total interest adjustment from 1981 through 1988 is \$2.5 billion. Therefore, both the cash balance and the uncommitted balance at the end of 1988 are higher than in Table 2 by \$4.7 billion.

TABLE 3. BASE CASE AND FULL FUNDING OF FAA SPENDING BY THE TRUST FUND (By fiscal year, in millions of dollars)

	1971	1972	1973	1974	1975	1976	TQ	1977
Base Case								
Trust Fund Tax Revenue ^a	563	649	758	840	962	938	277	1,191
Trust Fund Outlays ^b	287	742	626	521	579	547	92	853
Net Income Before Interest	275	-94	132	319	383	391	185	338
Interest on Investments ^c	0	0	0	28	96	146	1	194
Change in Cash ^d	897	162	132	347	479	537	186	532
Unexpended Balance, Start of Year	0	897	1,058	1,187	1,534	2,013	2,550	2,736
Change in Cash	897	162	132	347	479	537	186	532
Unexpended Balance, End of Year	897	1,058	1,191	1,534	2,013	2,550	2,736	3,267
Commitments Against Unexpended Balance	1,290	1,519	1,821	1,611	1,102	862	1,302	1,466
Uncommitted Balance, End of Year	-393	-461	-630	-77	911	1,687	1,434	1,801
General Fund Share of FAA Spending ^e	1,259	880	1,223	1,334	1,432	1,586	390	1,516
Percentage of Total FAA Spending	81	54	66	72	71	74	81	64
Full Funding of FAA								
Trust Fund Tax Revenue ^a	563	649	758	840	962	938	277	1,191
Trust Fund Outlays	1,510	1,358	1,617	1,552	1,721	1,870	379	1,993
Net Income Before Interest	-947	-710	-859	-712	-759	-933	-102	-802
Interest on Investments	0	0	0	0	0	0	0	0
Change in Cash ^d	-326	-454	-859	-712	-759	-933	-102	-802
Unexpended Balance, Start of Year	0	-326	-780	-1,643	-2,355	-3,114	-4,046	-4,148
Change in Cash	-326	-454	-859	-712	-759	-933	-102	-802
Unexpended Balance, End of Year	-326	-780	-1,639	-2,355	-3,114	-4,046	-4,148	-4,950
Commitments Against Unexpended Balance	1,290	1,519	1,821	1,611	1,102	862	1,302	1,466
Uncommitted Balance, End of Year	-1,615	-2,299	-3,459	-3,965	-4,215	-4,909	-5,450	-6,416
General Fund Share of FAA Spending ^e	37	263	232	303	290	262	103	376
Percentage of Total FAA Spending ^f	2	16	13	16	14	12	21	16

SOURCE: Congressional Budget Office and the Appendix to the Budget of the United States.

- a. Includes aviation excise tax revenues of \$1,180 million in 1981 and \$1,036 million in 1982 that remained in the general fund and were not credited to the trust fund.
- b. Excludes outlays of \$647 million in 1972 and \$73 million in 1973 that were actually financed by transfers from the general fund.
- c. Interest earnings after 1980 are larger than the actual numbers in Table 2 because of higher unexpended balances from the additional tax revenues in 1981 and 1982 (see note a).

(Continued)

TABLE 3. Continued

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Base Case										
1,326	1,526	1,874	1,201	1,169	2,165	2,499	2,851	2,736	3,060	3,189
1,115	1,114	1,224	1,306	1,512	1,792	1,392	2,613	2,365	2,631	2,896
211	412	650	-104	-343	373	1,108	238	371	429	293
219	282	400	627	763	852	870	1,113	1,218	1,268	1,280
430	694	1,050	522	420	1,225	1,977	1,352	1,589	1,698	1,573
3,267	3,697	4,392	5,442	5,964	6,385	7,609	9,586	10,938	12,527	14,225
430	694	1,050	522	420	1,225	1,977	1,352	1,589	1,698	1,573
3,697	4,392	5,442	5,964	6,385	7,609	9,586	10,938	12,527	14,225	15,797
1,413	1,598	1,640	1,705	1,793	2,795	3,431	4,558	4,750	4,376	5,285
2,284	2,794	3,802	4,259	4,591	4,814	6,155	6,381	7,777	9,848	10,512
1,663	1,736	1,913	1,853	1,380	1,612	2,454	1,681	2,334	2,293	2,324
60	61	61	59	48	47	64	39	50	47	45
Full Funding of FAA										
1,326	1,526	1,874	1,201	1,169	2,165	2,499	2,851	2,736	3,060	3,189
2,366	2,433	2,644	2,694	2,572	2,624	3,368	3,466	3,988	4,249	4,405
-1,040	-907	-771	-1,493	-1,403	-459	-868	-615	-1,252	-1,189	-1,216
0	0	0	0	0	0	0	0	0	0	0
-1,040	-907	-771	-1,493	-1,403	-459	-868	-615	-1,252	-1,189	-1,216
-4,950	-5,990	-6,897	-7,668	-9,160	-10,563	-11,022	-11,891	-12,505	-13,758	-14,947
-1,040	-907	-771	-1,493	-1,403	-459	-868	-615	-1,252	-1,189	-1,216
-5,990	-6,897	-7,668	-9,160	-10,563	-11,022	-11,891	-12,505	-13,758	-14,947	-16,163
1,413	1,598	1,640	1,705	1,793	2,795	3,431	4,558	4,750	4,376	5,285
-7,403	-8,495	-9,307	-10,865	-12,357	-13,818	-15,321	-17,063	-18,508	-19,323	-21,448
412	416	492	464	320	780	478	828	711	675	815
15	15	16	15	11	23	13	19	15	14	16

- d. Includes transfers of unexpended general fund appropriations of \$621 million in 1971 and \$255 million in 1972.
- e. The general fund share of FAA spending is not part of the trust fund, but is included here for comparison with trust fund outlays.
- f. These percentages do not always equal 15 percent since they are based on outlays, while the share of FAA spending assigned to the public sector is based on budget authority (obligation limits for airport grants).

Trust fund outlays for 1972 and 1973 are reduced by the amount of the general fund transfers received in those years that were intended to finance FAA operations spending (\$647 million and \$73 million respectively). In 1972, all FAA operations outlays were paid from the trust fund and a transfer from the general fund covered a portion of that spending. Both the transfer and the outlays are removed from the trust fund figures since they were actually a general fund expense. A similar though much smaller amount of general fund operations financing was channeled through the trust fund in 1973 and is also removed. For both years, these amounts are included in the entries for the general fund share of FAA spending. Finally, the transfers of unexpended general fund appropriations in 1971 and 1972 are retained but are included in the line for the change in cash instead of in tax revenue.

The base case, therefore, includes all of the excise taxes paid by aviation users, all of the outlays actually funded by those taxes, the actual cash balance and interest earned on it through 1980, and higher, calculated cash balances and interest income from 1981 through 1988 that reflect the additional tax revenue of 1981 and 1982.

The base case presents the financial history of the trust fund in a very favorable light. It accounts for all aviation excise tax revenue supplied by private-sector users, and for the interest income these taxes would have produced, yielding large jumps in the cash and uncommitted balances of \$4.7 billion by 1988. This amount represents an increase of over 80 percent in the current accumulated surplus. The result is a cash balance of \$15.8 billion at the end of 1988 and an uncommitted balance of \$10.5 billion.

TRUST FUND BALANCES WITH CAPITAL-ONLY FINANCING

Since the trust fund was established in 1971, it has financed all capital spending by the FAA and, in addition, has funded some of the operating costs of the FAA as well. If the trust fund had been used as a method of accounting for only capital spending, therefore, outlays from the trust fund would have been lower and the unexpended and uncommitted balances would have been higher. This is especially the case in the last 10 years, when the trust fund has financed sub-

stantially more of the FAA's operations spending than it did in its early years.

If the trust fund had financed only capital spending, its outlays would have been \$7.2 billion lower than in the base case. The interest income of the trust fund and the unexpended balances would therefore have been much higher. The total increase in interest income for the period would have been \$6.3 billion and the unexpended balance would have totaled \$29.2 billion at the end of 1988, an increase of 85 percent over the base case. Since commitments against the cash balance would not have changed from the base case, the \$13.5 billion increase in the unexpended balance would have translated into the same increase in the uncommitted balance. This accumulated surplus would, therefore, have been \$24 billion by the end of 1988, or more than double the balance in the base case.

The large cash balance in this approach represents the excess of tax revenue over capital outlays plus the interest earnings on these excess balances. From a user's perspective, this calculation, less commitments, best represents the user subsidy of general fund spending since the interest earnings represent value to the general fund in borrowing these revenues. An alternative method, which ignores the value of loaning these tax revenues to the general fund, is to calculate just the excess of tax revenue over capital outlays since the beginning of the trust fund. This total net income before interest equals \$12.1 billion by the end of 1988. This figure represents the excess taxes that need not have been collected if aviation excise taxes had been earmarked only for aviation capital spending.

TRUST FUND BALANCES WITH FULL USER FINANCING

An alternative calculation of the trust fund balances can be constructed from the base case by charging to the trust fund additional FAA spending that actually was financed from the general fund. This full funding case is shown in the bottom section of Table 3. The tax revenue line is identical to that in the base case, and trust fund outlays reflect an 85 percent trust fund share of FAA spending in each year.

The effect of charging more of the aviation system's costs to private-sector users is quite apparent, with outlays reaching double and triple their base levels in some years. Overall, the average increase for each year is about 93 percent. The total increase in trust fund outlays with full funding is \$22.6 billion.

Net income before interest is negative in each year, and the gap between tax revenue and outlays is large. As a result, the cash balance becomes negative in 1973, and no interest is earned throughout the period. The loss in interest earnings compared with the base case is \$9.4 billion. The interest and outlay effects combined reduce the unexpended balance by \$32 billion at the end of 1988, going from \$15.8 billion in the base case to -\$16.2 billion. The uncommitted balance becomes an accumulated deficit of \$21.4 billion by the end of 1988. In fact, the uncommitted balance is in deficit throughout the period, just the opposite of the base case where it is positive and growing nearly continuously after 1974.

Two points need to be made about these recalculations of the trust fund balances. First, while they yield negative cash balances in the trust fund, the Congress most likely would have changed either trust fund financing or spending to eliminate the funding shortfall. If users had been required to cover the full, private-sector share of aviation spending since 1971, aviation excise taxes would have had to be raised.

The second point is the asymmetry in the treatment of interest in these exercises. Though the cash balance becomes negative early in the period, no interest is charged to the trust fund for the shortfall in funds to cover spending. Just as the general fund has paid interest to the trust fund on its balances (balances loaned to the general fund), one could hypothesize an interest charge on general fund loans to cover the shortfall in trust fund financing of aviation programs. If the trust fund was debited with interest for borrowing to fund the cash balance shortfalls, the large negative unexpended and uncommitted balances would balloon to much higher levels.

Both of these points arise because the recalculations are intended only to illustrate the effect on the trust fund of higher user funding of the system's cost. Had the Congress required greater user financing of

the system, it would doubtless have made some tax or program changes to avoid deficits in the trust fund.

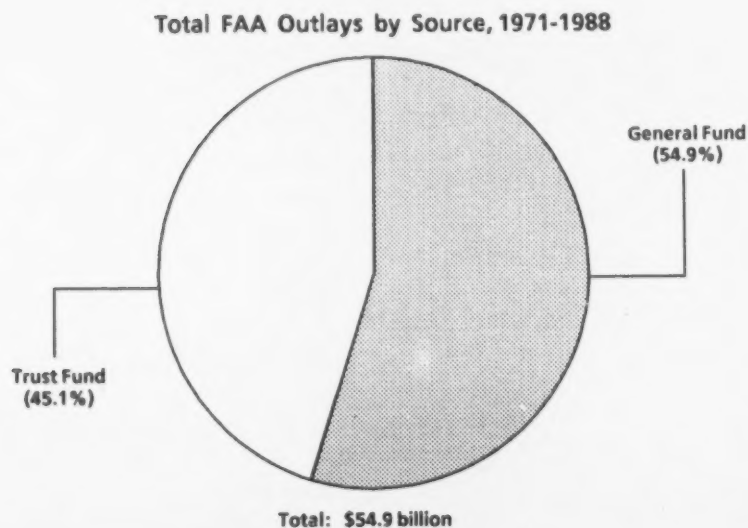
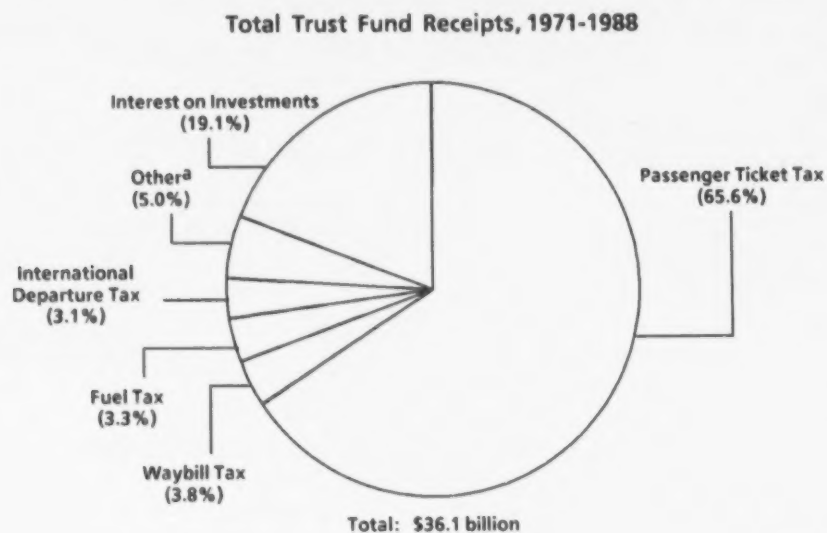
Figure 1 summarizes total trust fund receipts and FAA outlays from the start of the trust fund. FAA outlays are allocated according to the source and use of funds. Total trust fund receipts include interest income and general fund transfers as well as tax revenue, so these percentages differ from those above that pertain only to tax revenue.

CONCLUSION

The current accumulated surplus in the aviation trust fund is illusory. While this surplus appears to indicate that private-sector users have paid more in taxes than they have received in services, the opposite is, in fact, the case. The uncommitted balance in the trust fund has developed, ironically, because private-sector users of the aviation system have received more in capital and operating spending than they have paid in taxes.

As shown in the capital-only analysis, the accumulated surplus underrepresents the balance that would exist if the trust fund had not financed some of the FAA's operations spending. The tax revenue paid by users in excess of capital spending could be considered, from this viewpoint, as a subsidy of the general fund by the trust fund. Users of the aviation system have, nevertheless, received aviation services far beyond those represented by capital expenditures alone. In fact, as shown in the full-funding analysis, users of the aviation system have received aviation services far in excess of their tax payments. From the viewpoint of those who believe the trust fund should be financed as a full user-pay system, current trust fund balances fail to account for all the aviation spending that private-sector users would have to fund if they were to cover the full costs they impose on the aviation system. Public-sector financing of this part of the private-sector share of FAA spending could be considered a subsidy of the trust fund by the general fund. Alternatively, the subsidy of private-sector users by the general fund can be considered the difference between aviation excise tax revenue and the private-sector share of FAA spending.

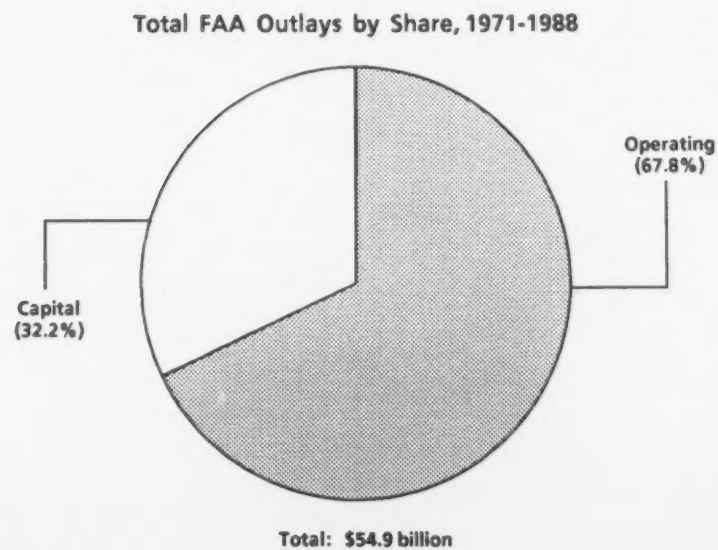
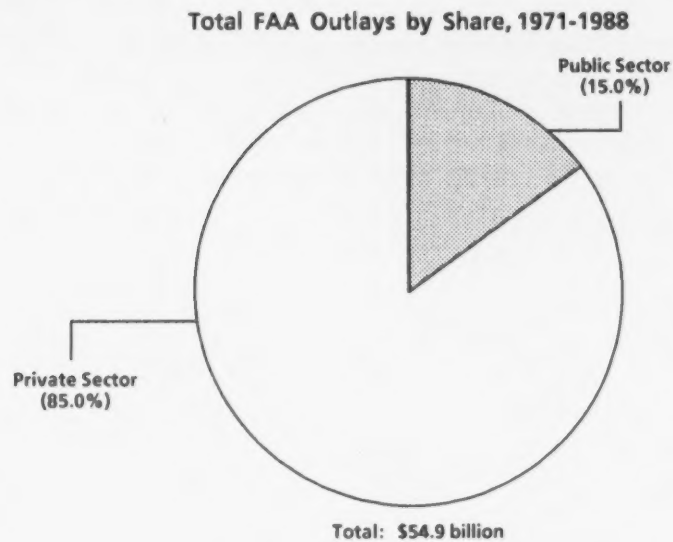
Figure 1.
Total Trust Fund Receipts and FAA Outlays, 1971-1988



SOURCE: Congressional Budget Office from federal budget data.

a. Other includes transfers from the general fund in 1971-1973, discontinued taxes, and refunds.

Figure 1.
Continued



Finally, it is misleading to conclude that the current congestion and capacity constraints in the aviation system are the result of trust fund surpluses. While federal investment in the aviation infrastructure may have been insufficient to meet the large increases in demand since deregulation, the level of the accumulated surplus does not necessarily indicate a backlog in capital spending.⁶ Further, it does not actually represent a pool of funds available to finance a future acceleration in investment spending. The accumulated surplus is only an accounting measure, and as such its meaning must be carefully circumscribed.

6. Because of technical difficulties in the National Airspace System Plan program, many capital spending projects are only now at the point where significant expenditures can and are being made.

CHAPTER III

BASELINE AND ALTERNATIVE

PROJECTIONS OF THE TRUST FUND

This chapter presents projections of the Airport and Airway Trust Fund under differing sets of assumptions for the 1989-1994 period. It begins with a baseline projection of Federal Aviation Administration outlays that maintains real, estimated 1989 outlays through 1994. The chapter then compares several projections of the trust fund.

Under the baseline projection, the fund's uncommitted balance declines by 1994 because of a reduction in aviation excise tax rates beginning in 1990. If this tax rate reduction is assumed not to occur, the fund's uncommitted balance grows continuously. Alternative projections of the trust fund are shown based on a capital-only or full user-pay approach to trust fund accounting. These projections are presented with and without the assumption of a tax rate reduction in the 1990-1994 period.

BASELINE PROJECTIONS

The baseline projections for the 1989-1994 period are similar to the historical patterns shown in Chapter I, with some notable exceptions. While authorizations for aviation capital spending have been substantially increased, the projected growth in spending for capital programs would not quite match these increases. As a result, aviation system users are projected to receive a 50 percent tax rate reduction on aviation excise taxes in January 1990 that is intended to reduce the accumulated surplus in the trust fund.¹ In spite of this cut in tax rates, the current accumulated surplus in the trust fund would persist through 1994 under current trust fund accounting procedures. From

1. The domestic passenger ticket tax, the cargo waybill tax, and the general aviation fuel taxes are subject to the 50 percent tax rate reduction. The international departure tax of \$3 per person is not changed by this provision. For simplicity in this chapter, references to reductions in the aviation excise tax rates do not explicitly exclude the international departure tax, though they should be read as excluding it.

the standpoint of the trust fund as a capital account, this tax rate reduction would eliminate the current annual excess of tax revenue over capital spending and would, in fact, result in less tax revenue than capital outlays in the 1991-1994 period by an average of about \$750 million each year. Overall, this loss would result in a general fund subsidy of \$1.8 billion for the 1989-1994 period.² From a full user-pay perspective and, in part, because of this cut in tax rates, aviation system users would receive an \$18.9 billion subsidy from general taxpayers over the next six years.

Federal Aviation Administration Outlays

Actual FAA outlays for 1988 and CBO's baseline projections of spending by major account through 1994 are presented in Table 4. These outlay projections are examined further below. Of particular note in these projections is the large proportion of total FAA spending financed by the general fund. In 1988, 45 percent of FAA spending came from the general fund and 55 percent from the trust fund; for the 1989-1994 period, these percentages are projected to average 49 percent and 51 percent respectively based on current policy. Total noncapital spending financed by the trust fund in this period would only be \$3.4 billion, or 16 percent of the \$20.9 billion in trust fund outlays from 1989 to 1994. Trust fund financing, hence user financing, of FAA programs would, therefore, more closely approximate a capital-only fund in this period than a full user-pay fund. From a full user-pay perspective, the average of 51 percent of FAA spending coming from the trust fund would fall well short of the full 85 percent level attributable to private-sector users of the aviation system.

The Trust Fund

The current CBO baseline projections for trust fund income, outlays, and balances are shown in Table 5. These baseline projections are strongly affected by the tax reduction provisions of the Airport and Airway Safety and Capacity Expansion Act of 1987. Absent these provisions, the recent upward trends in both the unexpended and un-

2. The total subsidy is defined here as the sum of the difference between total excise tax revenue and the appropriate user-funding share of FAA outlays for each year.

committed balances would continue uninterrupted through 1994. The projected triggering of tax rate reductions in 1990, however, would reverse these trends.

The 1987 act requires a halving of the ticket, waybill, and general aviation fuel tax rates if the total in 1988 and 1989 of the obligations for the grants-in-aid program and the appropriations for the facilities and equipment, and research, engineering, and development programs are less than 85 percent of the total authorizations for these programs in those years. Under CBO baseline projections, the tax rate reduction would occur and, therefore, the baseline projections of tax revenue for 1990 through 1994 reflect this reduction in tax rates. As a result, tax revenue peaks at \$3.6 billion in 1989 and then declines

TABLE 4. BASELINE PROJECTION OF FAA OUTLAYS
(By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Operations	3,110	3,384	3,633	3,801	3,973	4,152	4,339
General fund portion	2,281	2,911	3,128	3,274	3,421	3,576	3,737
Trust fund portion	830	473	505	527	551	576	602
Headquarters Administration	38	39	39	41	42	44	46
Airport Grants-In-Aid	825	1,165	1,293	1,386	1,441	1,519	1,591
Facilities and Equipment	1,043	1,056	1,158	1,293	1,441	1,552	1,521
Research, Engineering, Development	170	169	166	171	178	186	194
Other	5	-3	-3	-3	-3	0	0
Subtotal--General Fund ^a	2,324	2,947	3,164	3,311	3,461	3,621	3,783
Subtotal--Trust Fund ^b	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Total FAA ^c	5,192	5,811	6,286	6,689	7,072	7,453	7,691

SOURCE: Congressional Budget Office.

- a. Includes the general fund portion of operations, headquarters administration, and other.
- b. Includes the trust fund portion of operations, airport grants-in-aid, facilities and equipment, research, engineering, and development, and transfers to the National Oceanic and Atmospheric Administration to finance the aviation weather services program (not shown).
- c. Total FAA excludes trust fund financing of the aviation weather services program that is included in the trust fund subtotal.

TABLE 5. BASELINE PROJECTIONS OF THE AIRPORT AND AIRWAY TRUST FUND (By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Tax Revenue During the Period							
Passenger Ticket Tax	2,815	3,178	2,388	1,854	2,008	2,119	2,348
Waybill Tax	168	183	135	102	110	117	122
Fuel Tax	117	88	55	41	43	44	45
International Departure Tax	95	112	118	122	128	134	140
Refunds	-6	-6	-4	-3	-3	-3	-3
Total, Annual Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Cash Outgo During the Period							
Federal Aviation Administration							
Airport grants-in-aid	825	1,165	1,293	1,386	1,441	1,519	1,591
Facilities and equipment	1,043	1,056	1,158	1,293	1,441	1,552	1,521
Research, engineering, development	170	169	166	171	178	186	194
Trust fund share of FAA operations	830	473	505	527	551	576	602
National Oceanic and Atmospheric Administration	28	29	30	31	32	34	35
Total, Annual Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	-460	-1,293	-1,359	-1,455	-1,291
Interest on Investments	893	1,032	1,139	1,167	1,118	1,054	1,027
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, Start of Year	9,935	11,120	12,815	13,494	13,368	13,126	12,726
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, End of Year	11,120	12,815	13,494	13,368	13,126	12,726	12,462
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 ^a	6,777	6,760	6,006	5,277	4,440	3,636
General Fund Share of FAA Spending ^b	2,324	2,947	3,164	3,311	3,461	3,621	3,783

SOURCE: Congressional Budget Office.

- a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.
- b. The general fund share of FAA spending is not part of the trust fund projection, but is included here for comparison with trust fund outlays.

through 1991 when it reaches a low of \$2.1 billion. Tax revenue increases thereafter and reaches \$2.7 billion in 1994.

The combination of reduced tax revenue and growing outlays produces a large swing in net income before interest to the trust fund. The tax rate reduction in 1990 results in a \$1.1 billion decline in net income before interest, from a positive \$650 million in 1989 to a negative \$450 million in 1990. In the 1991-1993 period, the full-year effects of lower tax revenue produce larger net income deficits of \$1.3 billion, \$1.4 billion, and \$1.5 billion respectively. For the 1989-1994 period, net income before interest totals -\$5.2 billion.

The unexpended balance peaks in 1990, and interest income peaks in 1991. The effect of the decline in net income before interest in 1990 is more than offset by high interest earnings on the existing unexpended balance. In 1991, interest income, while at its peak, is insufficient to offset the large, negative net income before interest for the year so that the unexpended balance declines. In subsequent years, the decline in the unexpended balance reduces interest income, which, in conjunction with negative net income before interest, accelerates the decline in the unexpended balance. By 1994, the unexpended balance is \$12.5 billion--\$1.3 billion greater than in 1988, but \$1.0 billion below its peak in 1990.

The projected trust fund uncommitted balance increases in 1989, but then begins a steady decline through 1994, the end of the projection period. From a starting point of \$5.8 billion in 1988, this accumulated surplus grows to a peak of \$6.8 billion in 1989, declines slightly in 1990, and drops by about \$800 million a year to \$3.6 billion in 1994. The uncommitted balance declines more rapidly than the unexpended balance because commitments against the trust fund balance continue to increase over the period, though by decreasing amounts. The result is a decline in the accumulated surplus of \$2.2 billion by 1994, even though the unexpended balance is \$1.3 billion higher than in 1988.

THE TRUST FUND WITH NO TAX RATE REDUCTION

The powerful effect of the tax rate reduction provisions on the trust fund's unexpended balance and accumulated surplus can be seen by

comparing the baseline projections for the trust fund with projections for the trust fund without this tax rate reduction. Table 6 shows projections of trust fund tax revenue with no tax rate reduction, but with no other changes to the baseline. Outlays from the fund for the entire period, and all revenue, interest, and balance figures through 1989, are the same as in Table 5.

From 1990 to 1994, tax revenue climbs steadily in this case, reaching \$5.2 billion. Throughout the projection period, tax revenues exceed outlays by progressively increasing amounts. The result is net income before interest in 1994 of over \$1.2 billion. Since net income before interest is positive throughout the period, the unexpended balance grows continuously through 1994, and annual interest income to the fund more than doubles from its 1988 level. The combination of high net income before interest and increasing interest earnings leads to substantial yearly increases in the unexpended balance in the trust fund. In 1994, this increase, \$3.1 billion, is more than total outlays from the trust fund in 1988. The result is an unexpended balance of \$24.7 billion in 1994, more than twice the 1988 level.

The accumulated surplus in the trust fund follows a similar pattern, increasing rapidly over the projection period. From \$5.8 billion at the end of 1988, it reaches \$15.9 billion by 1994. Further, the increase in this uncommitted balance in 1994 alone is \$2.6 billion, just short of total outlays from the fund in 1988. Without the tax rate reduction in 1990, therefore, the unexpended balance and accumulated surplus would each increase by more than \$12 billion compared to baseline projections.

ALTERNATIVE CALCULATIONS OF TRUST FUND BALANCES

Alternative projections of the trust fund are presented below that recalculate trust fund outlays, interest, and balances based on either a capital-only or full user-pay approach to trust fund accounting. These projections more clearly illustrate the relationship between the taxes that users are projected to pay for the aviation system and the spending for which they might be charged. Both the CBO baseline

TABLE 6. PROJECTION OF THE AIRPORT AND AIRWAY TRUST FUND WITH NO TAX RATE REDUCTION
(By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Tax Revenue During the Period							
Passenger Ticket Tax	2,815	3,178	3,436	3,708	4,016	4,238	4,696
Waybill Tax	168	183	194	204	220	234	243
Fuel Tax	117	88	91	94	97	100	103
International Departure Tax	95	112	118	122	128	134	140
Refunds	-6	-6	-6	-6	-6	-6	-6
Total, Annual Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Cash Outgo During the Period							
Federal Aviation Administration							
Airport grants-in-aid	825	1,165	1,293	1,386	1,441	1,519	1,591
Facilities and equipment	1,043	1,056	1,158	1,293	1,441	1,552	1,521
Research, engineering, development	170	169	166	171	178	186	194
Trust fund share of FAA operations	830	473	505	527	551	576	602
National Oceanic and Atmospheric Administration	28	29	30	31	32	34	35
Total, Annual Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	681	713	811	834	1,233
Interest on Investments	893	1,032	1,190	1,366	1,513	1,659	1,888
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, Start of Year	9,935	11,120	12,815	14,687	16,766	19,089	21,582
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, End of Year	11,120	12,815	14,687	16,766	19,089	21,582	24,703
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 ^a	6,777	7,953	9,404	11,240	13,296	15,877
General Fund Share of FAA Spending ^b	2,324	2,947	3,164	3,311	3,461	3,621	3,783

SOURCE: Congressional Budget Office.

- a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.
- b. The general fund share of FAA spending is not part of the trust fund projection, but is included here for comparison with trust fund outlays.

projections and the adjusted projections with no tax rate reduction are used as bases from which both capital-only and user-pay projections are made.

The Trust Fund as a Capital-Only Account

The middle sections of Tables 7 and 8 present alternative calculations of trust fund outlays and balances that show the effect on the trust fund projections of financing only capital expenditures from the fund. Table 7 shows the case in which the tax rate reduction in 1990 occurs, and Table 8 shows projections without the tax rate reduction. The top section in Table 7 is the baseline projection from Table 5, and the top section in Table 8 is the adjusted projection from Table 6 with no tax rate reduction. The capital-only cases in each table differ from these projections by changes in trust fund outlays, interest income, the unexpended balance, and the accumulated surplus.

In Table 7, tax revenue greatly exceeds the capital-only outlays in 1989, like the effects observed in Chapter II. With the tax reduction during 1990, however, tax revenue and trust fund outlays are brought much closer together. In fact, since the tax rate reduction does not occur until the second quarter of the fiscal year, tax revenues and adjusted outlays are nearly the same in 1990. In subsequent years, the full-year effect of the reduction in tax rates leads to an excess of projected outlays over projected tax revenues, so that all capital costs are not funded by current tax revenues. The result is negative net income before interest of more than \$3 billion in the 1991-1994 period. Interest income and the unexpended balance in this projection are higher than in the baseline since outlays would be less in this case. The result is that the unexpended balance reaches \$16.9 billion by 1994, or \$4.4 billion more than in the baseline projection. This increase in the unexpended balance is directly translated into a \$4.4 billion increase in the accumulated surplus as well, since commitments against the unexpended balance would not change. The uncommitted balance therefore exceeds \$8 billion by 1994.

In Table 8, the obvious effects of leaving tax rates at their current level while reducing the FAA spending financed by the trust fund are quite apparent. Net income before interest exceeds \$1 billion in 1989

TABLE 7. BASELINE AND ALTERNATIVE PROJECTIONS
OF TRUST FUND (By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
CBO Baseline Projection							
Trust Fund Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	-460	-1,293	-1,359	-1,455	-1,291
Interest on Investments	893	1,032	1,139	1,167	1,118	1,054	1,027
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, Start of Year	9,935	11,120	12,815	13,494	13,368	13,216	12,726
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, End of Year	11,120	12,815	13,494	13,368	13,126	12,726	12,462
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 ^a	6,777	6,760	6,006	5,277	4,440	3,636
Capital-Only Funding by Trust Fund							
Trust Fund Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	2,896	2,392	2,617	2,850	3,060	3,256	3,306
Net Income before Interest	293	1,163	75	-734	-775	-845	-654
Interest on Investments	893	1,055	1,210	1,295	1,303	1,300	1,347
Change in Cash	1,185	2,218	1,285	561	528	455	693
Unexpended Balance, Start of Year	9,935	11,120	13,338	14,623	15,184	15,712	16,167
Change in Cash	1,185	2,218	1,285	561	528	455	693
Unexpended Balance, End of Year	11,120	13,338	14,623	15,184	15,712	16,167	16,860
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,363	7,851	8,289	8,829
Uncommitted Balance, End of Year	5,835 ^a	7,300	7,889	7,821	7,861	7,878	8,031
Full Funding of FAA Spending							
Trust Fund Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	2,896	4,909	5,326	5,681	6,019	6,352	6,542
Net Income before Interest	293	-1,354	-2,634	-3,565	-3,734	-3,941	-3,890
Interest on Investments	893	941	850	648	365	57	0
Change in Cash	1,185	-413	-1,784	-2,917	-3,369	-3,884	-3,890
Unexpended Balance, Start of Year	9,935	11,120	10,707	8,923	6,006	2,637	-1,247
Change in Cash	1,185	-413	-1,784	-2,917	-3,369	-3,884	-3,890
Unexpended Balance, End of Year	11,120	10,707	8,923	6,006	2,637	-1,247	-5,137
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,362	7,850	8,287	8,827
Uncommitted Balance, End of Year	5,835 ^a	4,669	2,189	-1,356	-5,213	-9,534	-13,964

SOURCE: Congressional Budget Office.

a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

TABLE 8. ALTERNATIVE PROJECTIONS OF THE TRUST FUND WITH NO TAX RATE REDUCTION
(By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Projection Under Current Tax Rates							
Trust Fund Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	681	713	811	834	1,233
Interest on Investments	893	1,032	1,190	1,366	1,513	1,659	1,888
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, Start of Year	9,935	11,120	12,815	14,687	16,766	19,089	21,582
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, End of Year	11,120	12,815	14,687	16,766	19,089	21,582	24,703
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 ^a	6,777	7,953	9,404	11,240	13,296	15,877
Capital-Only Funding by Trust Fund							
Trust Fund Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	2,896	2,392	2,617	2,850	3,060	3,256	3,306
Net Income before Interest	293	1,163	1,216	1,272	1,395	1,444	1,870
Interest on Investments	893	1,055	1,262	1,494	1,698	1,904	2,207
Change in Cash	1,185	2,218	2,478	2,766	3,093	3,348	4,077
Unexpended Balance, Start of Year	9,935	11,120	13,338	15,816	18,582	21,675	25,023
Change in Cash	1,185	2,218	2,478	2,766	3,093	3,348	4,077
Unexpended Balance, End of Year	11,120	13,338	15,816	18,582	21,675	25,023	29,101
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,363	7,851	8,289	8,829
Uncommitted Balance, End of Year	5,835 ^a	7,300	9,082	11,219	13,824	16,734	20,272
Full Funding of FAA Spending							
Trust Fund Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	2,896	4,909	5,326	5,681	6,019	6,352	6,542
Net Income before Interest	293	-1,354	-1,493	-1,559	-1,564	-1,652	-1,366
Interest on Investments	893	941	901	848	760	661	589
Change in Cash	1,185	-413	-592	-711	-804	-991	-777
Unexpended Balance, Start of Year	9,935	11,120	10,707	10,116	9,404	8,600	7,609
Change in Cash	1,185	-413	-592	-711	-804	-991	-777
Unexpended Balance, End of Year	11,120	10,707	10,116	9,404	8,600	7,609	6,832
Commitments Against Unexpended Balance	5,285 ^a	6,038	6,734	7,362	7,850	8,287	8,827
Uncommitted Balance, End of Year	5,835 ^a	4,669	3,382	2,042	750	-678	-1,995

SOURCE: Congressional Budget Office.

a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

and grows continuously through 1994, reaching nearly \$2 billion. When the resulting large interest earnings of the fund are included, the result is a rapidly increasing unexpended balance. By 1994, the unexpended balance reaches over \$29 billion and the uncommitted balance exceeds \$20 billion.

The Trust Fund as a User-Pay Account

To show the effect on the trust fund of higher levels of user support for FAA spending, alternative calculations of aviation outlays and trust fund balances similar to those in Table 3 are presented in the bottom sections of Tables 7 and 8. The full funding case differs from the baseline and adjusted projections (shown at the top of each table) by changes made to trust fund outlays, which, in turn, produce changes in the unexpended balance, interest income, and the accumulated surplus.

In Table 7, outlays exceed tax revenue from the start so that net income before interest is negative even before tax rates are reduced in 1990. However, unlike the full funding case in Table 3 above where the unexpended balance is never positive, the unexpended balance here begins at over \$11 billion. Interest income is, therefore, large early in the period and positive until 1994. It thus serves to offset a portion of the deficit in current year net income before interest. Nevertheless, from 1990 to 1994 net income before interest declines from -\$2.6 billion to -\$3.9 billion. This large shortfall in annual net income before interest swamps interest earnings, causing the unexpended balance to drop rapidly in those years. The projected unexpended balance, therefore, peaks in 1988 at \$11.1 billion and then declines continuously to -\$5.1 billion at the end of 1994. The uncommitted balance declines throughout the period, falling from \$5.8 billion in 1988 to -\$14 billion by 1994. With full user funding, therefore, the accumulated surplus in the trust fund would be consumed by 1991 and the trust fund would end the period with unfunded commitments.

In the full funding case in Table 8, net income is again negative throughout the period as in Table 7, even though tax rates are not cut in these projections. The shortfall in net income before interest is, however, only about half what it is in Table 7. Interest income de-

clines throughout the period with the decline in the unexpended balance, and is not sufficient in any year to compensate for the negative net interest before income. The unexpended balance, therefore, decreases continuously through 1994 when it reaches \$6.8 billion. In this case, the uncommitted balance drops continuously through 1994, turning negative in 1993. Thus, with no reduction in tax rates and with full user funding of FAA spending, the unexpended balance declines roughly by half and the uncommitted balance is consumed by 1993 so that the trust fund has unfunded commitments of \$2.0 billion by 1994.

CONCLUSIONS

Under the baseline projection for the 1989-1994 period, the accumulated surplus and the large unexpended balance in the trust fund would persist through 1994 despite a 50 percent reduction in tax rates for aviation system users. Table 9 shows projected total revenue and outlays from the trust fund under the baseline and presents alternative projections of total FAA spending based on capital-only and user-pay allocations of spending in this period.

Total FAA spending from 1989 through 1994 is projected to be \$41 billion. Under current policy, the trust fund portion of these outlays would be \$20.7 billion and the general fund share would be \$20.3 billion. Tax revenue supplied by private-sector users of the aviation system would be \$15.7 billion, or \$5 billion less than trust fund spending in this period. Interest income would more than compensate for this funding gap, so that the unexpended balance would actually increase from \$11.1 billion to \$12.5 billion by the end of 1994. The accumulated surplus would decline, as discussed earlier, to \$3.6 billion because of increasing commitments against the unexpended balance.

Since the purpose of the trust fund is to track the receipt and spending of earmarked tax revenues, there are two ways of viewing these projected trust fund balances and the alternative projections discussed below. One can compare the share of FAA funding for which private users would be responsible under the alternative views of the trust fund with projections of trust fund spending under current policy. This comparison would show the degree to which the current

method of accounting for aviation spending deviates from these alternative user shares. However, the current projection of trust fund financing of FAA spending relies on interest earned on an existing unexpended balance to meet part of its funding share. Since each of the alternative concepts of user funding (if they had been in place from the start of the trust fund) would have yielded different trust fund balances at the end of 1988, comparing the projected user cost shares with projected trust fund support produces a misleading picture of user financing of FAA spending. A second approach to analyzing future support for FAA spending that avoids this problem is to compare only pro-

TABLE 9. SUMMARY OF PROJECTED TAX REVENUE, FAA EXPENDITURES, AND TRUST FUND BALANCES
(Totals for fiscal years 1989-1994, in billions of dollars)

	Total 1989-1994
Excise Tax Revenue	
With tax rate reduction	15.7
Without tax rate reduction	25.8
Total FAA Outlays	41.0
Trust fund portion ^a	20.7
General fund portion	20.3
Total FAA Outlays	41.0
Capital share	17.5
Noncapital share	23.5
Total FAA Outlays	41.0
Private-sector share	34.6
Public-sector share	6.4
Status of Trust Fund at End of 1994	
Under Baseline Projection	
Unexpended Balance	12.5
Uncommitted Balance	3.6

SOURCE: Congressional Budget Office.

a. Excludes \$191 million for the aviation weather services program that would be financed by the trust fund.

jected user tax revenue with projected user shares of spending in the alternative funding scenarios. Both of these approaches are illustrated below.

Capital-Only Perspective

The capital and noncapital shares of projected FAA spending are shown in Table 9. Projected capital spending totals \$17.5 billion in the 1989-1994 period, while the remaining \$23.5 billion of FAA spending consists of noncapital expenditures. Compared with the projections of trust fund spending under current policy, users would be financing \$3.2 billion (\$20.7 minus \$17.5 billion) more than their capital share of expenditures on the aviation system. In this sense, then, the trust fund could be considered to be subsidizing general fund expenditures for noncapital programs. On the basis of tax revenue alone, however, user support for aviation spending--\$15.7 billion--would be \$1.8 billion less than the \$17.5 billion capital share of FAA spending. From this standpoint, the general fund would be subsidizing users for this part of capital expenditures not financed by current tax revenue. If the tax rates were not reduced in 1990, however, users would pay a projected \$25.8 billion, while the capital share of FAA spending is only \$17.5 billion. In this case, users would be subsidizing the general fund by \$8.3 billion over the 1989-1994 period.

User-Pay Perspective

The full private-sector share of the \$41 billion in total FAA spending during 1989-1994 is \$34.6 billion, and the public-sector share is \$6.4 billion. Compared with projected trust fund financing of \$20.7 billion, the difference of \$13.9 billion could be considered a general fund subsidy of private sector users of the aviation system. Comparing tax revenue alone with the full user share, the difference between projected tax revenue of \$15.7 billion and the full user share of \$34.6 billion is \$18.9 billion. If one believes that users, through the trust fund, should finance their full share of system costs, then the unexpended balance in the trust fund exists only because of the long-term general fund subsidy for aviation services and would be negative if a full user-pay system had been in place from the beginning of the trust fund. As a result, the only resources in this case that would be available to fi-

nance the future private-sector share of FAA spending would be future tax revenue. Therefore, \$18.9 billion is a more accurate estimate of the general fund subsidy for private-sector users of the aviation system from this perspective.

If the rates for aviation excise taxes were not reduced in 1990, tax revenue for the period would total \$25.8 billion. Even absent the tax rate reduction in 1990, therefore, private-sector users would receive a general fund subsidy of \$8.8 billion over the next six years. This amount represents the difference between tax revenue of \$25.8 billion and the private-sector share of projected FAA spending of \$34.6 billion. The tax rate reduction in 1990 more than doubles the general fund subsidy of private-sector users.

This subsidy has general budgetary implications as well. The tax provisions that are to take effect in 1990 were designed to reduce the accumulated trust fund surplus that arose because of previous subsidies either through an increase in FAA spending from the trust fund or through the tax rate reduction. The result would be a projected \$10.1 billion reduction in taxes for a group that is currently not paying its share of aviation system costs. If private-sector users of the aviation system were not subsidized by general taxpayers over the next six years, but were required to pay excise taxes equal to their share of aviation system expenses, then the tax rate reduction would have to be eliminated and tax rates would, in fact, have to be increased from their current levels to finance the \$8.8 billion difference between projected tax revenue and the private-sector share of costs. The impact on federal budget deficits over the 1989-1994 period of requiring private-sector users to fund their full share of aviation system spending would be a cumulative reduction of \$14.2 billion compared with the CBO baseline.³

Taken in isolation, trust fund balances are misleading as indicators of whether too much or too little tax revenue is being collected from private-sector users of the aviation system, or whether too little is being spent from the trust fund. The answers to those questions depend on which aviation programs users are being asked to fund. Whether the current balances in the trust fund should be viewed as

3. Because of offsetting reductions in tax revenue elsewhere, the tax rate increase would only result in a deficit reduction equal to 75 percent of the higher tax revenue.

evidence of funds hoarded by the government for nonaviation purposes and that rightfully belong to users depends on whether one believes that the trust fund should finance all the private costs imposed on the system, or limit itself to capital costs only.

CHAPTER IV

OPTIONS FOR AVIATION

SPENDING AND FINANCING

Four options are presented below for the future financing of aviation programs. These options consider only Federal Aviation Administration programs for aviation and do not address other federal spending that benefits the aviation sector, such as National Air and Space Administration outlays for aeronautical research and development. The options are:

- o Continue current policy, leaving the current trust fund and aviation programs unchanged;
- o Eliminate the tax rate reduction while leaving spending programs and trust fund accounting unchanged;
- o Restructure the trust fund clearly as a capital-only account and set aviation excise taxes at a level sufficient to finance only FAA capital spending; or
- o Transform the trust fund into a true user-pay system in which all private-sector costs of the FAA are accounted for by the trust fund and financed through aviation excise taxes.

Each option is accompanied by a projection of trust fund revenue, outlays, and balances in the 1990-1994 period.

Whatever the Congress decides to do about these and other financial issues, there will be continuing questions as to how much each user group within the private sector should pay for the aviation system, how much expansion of aviation infrastructure is required, and how the use of the aviation system can be made more efficient through a different way of pricing the system's services to users.¹

1. These questions are addressed in two other Congressional Budget Office studies: *Policies for the Deregulated Airline Industry* (July 1988); and *New Directions for the Nation's Public Works* (September 1988).

OPTION I: CONTINUE CURRENT POLICY

The Congress could decide to continue current policy. This is the option reflected in the baseline projection presented in Chapter III. The main advantage of Option I is that the current program is in place and would require no legislative action until 1990, when authorizations for trust fund taxes and some of the trust fund spending programs expire. In addition, under the CBO baseline, this option would produce a 38 percent decrease in the uncommitted balance in the trust fund by the end of 1994. The projected year-by-year effects of following this option on trust fund tax revenue, outlays, and unexpended and uncommitted balances are shown in Table 10.

This option has significant disadvantages. First, it would continue the confusion concerning both annual and accumulated surpluses in the trust fund, since the trust fund would be neither a dedicated capital fund nor a full user-pay system, but a hybrid of the two. Second, though the accumulated surplus would decline significantly, it would still persist. Third, from the perspective of the fund seen as a dedicated capital source, the fund would be receiving less in tax revenue after 1990 than the projected capital spending for aviation. Fourth, from the perspective of the fund seen as a full user-pay system, private-sector users would be receiving a \$17.8 billion subsidy from general taxpayers over the 1990-1994 period. Fifth, also from a user-pay perspective, the trust fund would lose \$10.1 billion in

TABLE 10. PROJECTION OF TRUST FUND REVENUE,
OUTLAYS, AND BALANCES UNDER OPTION I
(By fiscal year, in millions of dollars)

	1990	1991	1992	1993	1994
Trust Fund Tax Revenue	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	3,152	3,409	3,644	3,866	3,943
Unexpended Balance, End of Year	13,494	13,368	13,126	12,726	12,462
Uncommitted Balance, End of Year	6,760	6,006	5,277	4,440	3,636

SOURCE: Congressional Budget Office.

revenue over the five years because of the tax rate reduction for private-sector users of the aviation system, a group that even before the halving of tax rates is not paying its full share of the system's costs.

OPTION II: ELIMINATE THE TAX RATE REDUCTION

Option II proposes to eliminate the tax reduction that would occur in January 1990 under CBO baseline projections. It would not change current FAA spending or trust fund accounting for aviation spending. It differs from Option I only in the projection of tax revenue and the resulting effects on the trust fund balances for the 1990-1994 period. Under this option, tax revenue for the 1990-1994 period would be \$10.1 billion higher than under the CBO baseline. The year-by-year effects on trust fund tax revenue, outlays, and the unexpended and uncommitted balances in the trust fund are shown in Table 11.

The principal advantage of Option II is that, by maintaining current aviation excise tax rates, it would decrease the federal budget deficits projected in the baseline. The cumulative effect would be a \$7.6 billion decrease in the deficits over the 1990-1994 period relative to baseline projections. In addition, from a user-pay perspective, this option would increase the degree to which private-sector users fund their share of FAA spending and would avoid reducing the taxes of a

TABLE 11. PROJECTION OF TRUST FUND REVENUE, OUTLAYS, AND BALANCES UNDER OPTION II
(By fiscal year, in millions of dollars)

	1990	1991	1992	1993	1994
Trust Fund Tax Revenue	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	3,152	3,409	3,644	3,866	3,943
Unexpended Balance, End of Year	14,687	16,766	19,089	21,582	24,703
Uncommitted Balance, End of Year	7,953	9,404	11,240	13,296	15,877

SOURCE: Congressional Budget Office.

group that is not even currently financing its share of aviation system costs. Finally, from a capital-only perspective, trust fund tax revenue would be more than sufficient to finance the projected capital outlays in each year.

In fact, without the tax rate reduction in 1990, nearly \$7.6 billion in additional capital spending would be available over the next five years under this option without increasing the deficit from baseline levels. Increases in capital spending might speed the building of new airport and airway capacity. On the other hand, it is difficult to know the optimal level of investment required in the aviation system when prices are not being charged for FAA services. Further, the current program of airport investment might not produce the optimal levels and types of airport investments, and congestion might not be quickly or efficiently reduced, if airport grants are not targeted to the correct airport categories.² Further, investment in modernizing and enlarging the airway system would probably face technological constraints on the rate of development and production of the new generation of airway equipment.

This option also has several disadvantages. First, as in Option I, it would continue the confusion concerning both annual and accumulated surpluses in the trust fund, since the trust fund would still be neither a dedicated capital fund nor a full user-pay system. Second, the accumulated surplus would increase relative to the baseline. Third, from the perspective of the trust fund as a dedicated capital account, system users would be paying more in tax revenue than the projected capital spending in the baseline. Fourth, from the perspective of the trust fund as a user-pay account, there would still be a \$7.6 billion subsidy of private-sector users during the 1990-1994 period.

2. See Congressional Budget Office, *Policies for the Deregulated Airline Industry*, chap. 3; and *New Directions for the Nation's Public Works*, chap. 3.

OPTION III: RESTRUCTURE THE TRUST FUND AS A DEDICATED CAPITAL FUND

Option III would clearly define the trust fund as a dedicated capital account. As such, it would serve as the repository for aviation excise taxes paid by private-sector users of the aviation system and would finance the full capital costs of the aviation system from this revenue. FAA capital expenditures include spending for airport grants-in-aid, airway system facilities and equipment, and research, engineering, and development. This option would set tax rates at levels just sufficient to cover the annual capital program of the aviation system.³ It would eliminate the accumulated trust fund surplus by canceling it at the end of 1989, and eliminate interest payments on the remaining cash balance. (The Administration proposed eliminating the investment of the unexpended balance in the trust fund by the Treasury in its proposal for reauthorization of the trust fund in 1985.) Table 12 presents a summary of the effects of these changes.

The tax revenues shown each year in Table 12 are just equal to projected budget authority for capital spending in those years. Since outlays lag budget authority, the outlays from the trust fund would not equal budget authority but would yield either a positive or a negative cash balance in the fund. Since all of these balances are committed, however, the uncommitted balance in the trust fund would be zero throughout the period. If interest was paid on the unexpended (but committed) balance, the interest income would produce a surplus in the account. In this option, interest would not be paid, but if it were, adjustments to future tax rate levels could be made based on the interest earnings of the trust fund to prevent the growth of an uncommitted balance.

This option would essentially terminate the current trust fund and replace it with a dedicated capital fund. In the process, the cur-

3. Setting user taxes equal to capital spending in each year would not necessarily equal actual capital consumption in that year. Since capital assets are long lived, the actual consumption of investment expenditures occurs over a number of years. Charging users the full cost of capital goods in the year they are purchased is equivalent to expensing rather than depreciating these expenditures. While current capital spending may serve as a proxy for capital consumption, there is the possibility that current users may be over- or undercharged for capital use if bulges in capital spending occur. For a treatment of these issues as regards the proper allocation of capital costs to users, see Federal Aviation Administration, *Allocation of Future Federal Airport and Airway Costs*, FAA-APO-87-12 (December 1986).

rent accumulated surplus would be eliminated. Besides this uncommitted balance, the current trust fund includes unexpended balances that are committed to future capital outlays. The unexpended balance, equal to commitments, would remain in the trust fund since the commitments are for capital programs. At some point, therefore, tax rates might have to rise to produce revenue in excess of current budget authority, if outlays to meet these past commitments exceeded budget authority.

Option III has three main advantages. First, the accumulated surplus in the trust fund would be eliminated, thus ending the illusion that additional funds could be made available for capital spending without increasing the deficit. Second, trust fund revenue and spending would be clearly earmarked for specific capital programs only, and the tax revenue received each year would be based on projected budget authority for these programs. Third, since tax revenue during the 1990-1994 period would have to increase by \$5.7 billion compared with baseline projections to fund projected capital spending, the cumulative federal budget deficits during the period would decline by \$4.3 billion from the CBO baseline projections.

There are two main disadvantages. First, and most important, the general fund would still subsidize private-sector users of the system. Total FAA spending over the 1990-1994 period would be \$35.2 billion, the private-sector share would be \$29.9 billion, and

TABLE 12. PROJECTION OF TRUST FUND REVENUE, OUTLAYS, AND BALANCES UNDER OPTION III
(By fiscal year, in millions of dollars)

	1990	1991	1992	1993	1994
Trust Fund Tax Revenue	3,313	3,479	3,548	3,694	3,846
Trust Fund Outlays	2,617	2,850	3,060	3,256	3,306
Unexpended Balance, End of Year	6,734	7,363	7,851	8,289	8,829
Uncommitted Balance, End of Year	0	0	0	0	0

SOURCE: Congressional Budget Office.

excise tax revenue would be \$17.9 billion, equal to budget authority for capital programs in this period. Therefore, the general fund would provide a subsidy to private-sector users of the aviation system of \$12 billion, which is equal to the difference between the private-sector share and projected tax revenue. Second, and related to the first disadvantage, though the trust fund would be clearly a dedicated capital fund, it might give the impression that since capital costs are the only aviation system costs that private-sector users are financing, they are the only costs private-sector users ought to finance. This is not necessarily the case.

OPTION IV: TRANSFORM THE TRUST FUND INTO A FULL USER-PAY SYSTEM

The purpose of Option IV would be to eliminate the subsidy of private-sector users of the aviation system, and to restructure the trust fund to account better for aviation tax revenue and outlays. It would eliminate the accumulated trust fund surplus by canceling it at the end of 1989, and would also eliminate interest payments on the remaining unexpended balance. It would require that the entire private-sector share of system expenses be covered by the trust fund. Finally, it would eliminate the automatic tax rate reduction scheduled for 1990 and, in fact, increase excise taxes so that all trust fund spending would be covered each year by aviation-related tax revenue. Table 13 summarizes the effects of Option IV.

The proposed canceling of the accumulated trust fund surplus and the elimination of interest payments on the remaining unexpended balance are intended to take cognizance of the fact that both the entire unexpended balance and the accumulated surplus are the result of general fund subsidies from the start of the trust fund. Canceling the accumulated surplus would reduce the unexpended balance at the end of 1989 by \$6.8 billion to \$6.0 billion, an amount that is equal to the commitments against it in the trust fund.

The option would require that the full private-sector share of FAA appropriations for the 1990-1994 period--\$29.9 billion under CBO

TABLE 13. PROJECTION OF TRUST FUND REVENUE,
OUTLAYS, AND BALANCES UNDER OPTION IV
(By fiscal year, in millions of dollars)

	1990	1991	1992	1993	1994
Trust Fund Tax Revenue	5,750	5,994	6,252	6,524	6,806
Trust Fund Outlays	5,326	5,681	6,019	6,352	6,542
Unexpended Balance, End of Year	6,462	6,775	7,008	7,180	7,444
Uncommitted Balance, End of Year	0	0	0	0	0

SOURCE: Congressional Budget Office.

baseline projections--come from the trust fund. This requirement would assure that private-sector users pay their full share of system costs. In addition, to properly account for aviation expenditures, the option would raise aviation-related tax revenue each year in amounts sufficient to cover all the trust fund spending commitments so that no renewed general fund subsidy of private-sector users would occur.

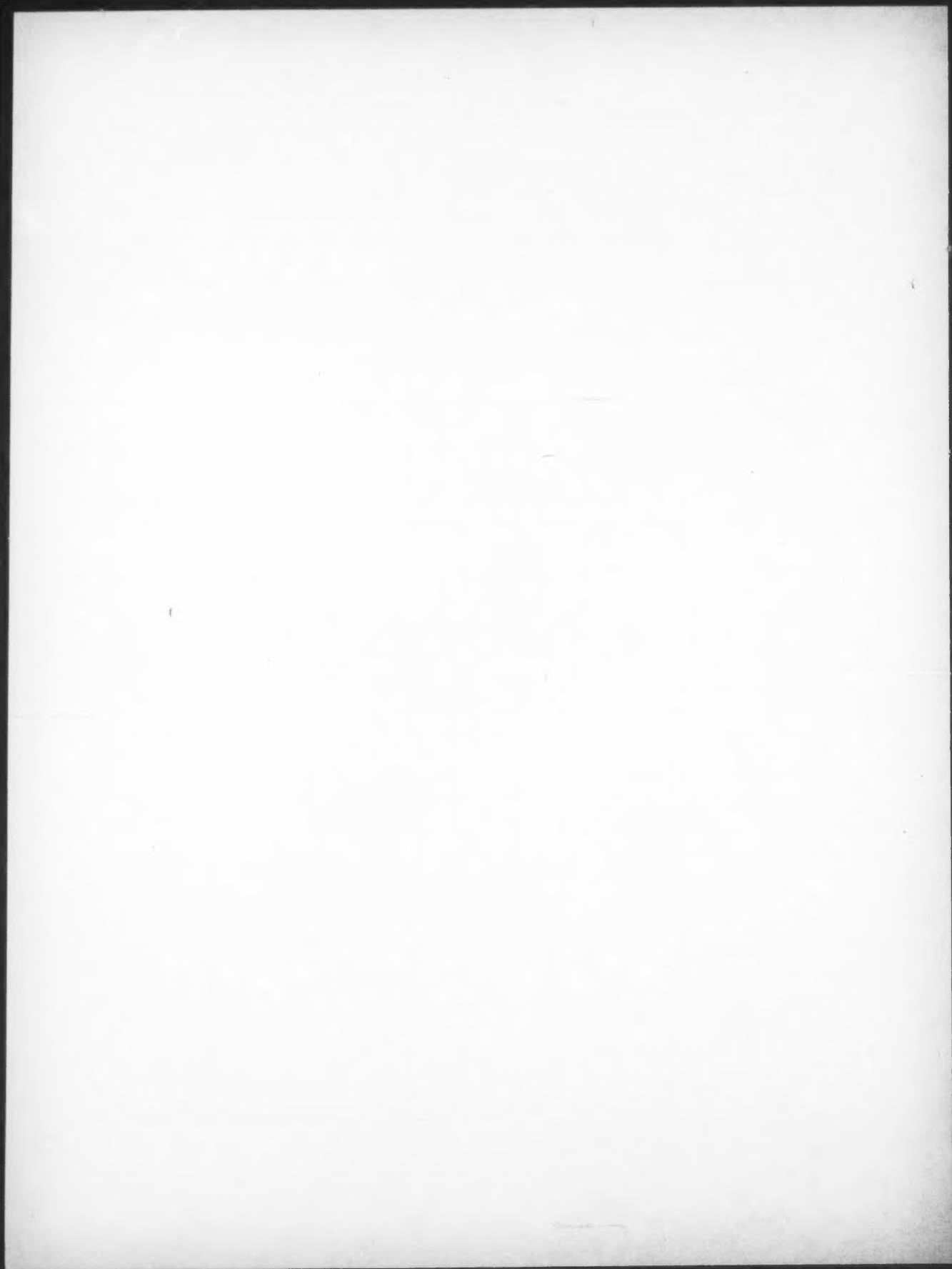
Under this option, federal aviation spending would be unchanged from baseline levels, and aviation excise taxes would increase by \$19.2 billion, equal to the difference between projected excise tax revenues and the projected private-sector share of FAA appropriations. This combination of no change in spending and increased taxes would decrease the federal budget deficits over the next five years by \$14.4 billion and would eliminate the general fund subsidy and the accumulated trust fund surplus.

Option IV has four principal advantages. First, the general fund subsidy of private-sector users would be eliminated. By requiring users to pay the actual costs they impose on the system, it would encourage more efficient use of current capacity.⁴ Second, the misleading accumulated surplus in the trust fund would be eliminated.

4. While full cost recovery from system users might produce a more efficient use of the aviation system, some private-sector user groups might be subsidizing other private-sector users if the current tax structure was continued. Specifically, general aviation appears to underpay its share of private-sector costs. Raising all aviation-related excise taxes by the same percentage would continue this subsidy by commercial aviation.

Third, federal deficits would be reduced by \$14.4 billion while making the financing of aviation services more equitable. Finally, surpluses would not occur in the future, since the tax rates imposed would depend on the funding levels set by the Congress.

There are several disadvantages to Option IV. First, compared with current tax revenue, aviation-related excise tax revenue would have to increase by about 40 percent. Current users of the aviation system, accustomed to the present general fund subsidies, might resist paying the true costs of their use of the system. This might also affect the future use of the aviation system. Second, the option does not include any additional spending for aviation infrastructure to reduce system congestion, although higher tax rates might help by reducing demand. Third, while private-sector users would fund their share of FAA spending under this option, they would not be funding other, non-FAA, federal programs that benefit aviation.



GLOSSARY

Accumulated Surplus. See Uncommitted Balance.

Airport System. As used in this study, includes the 3,243 airports that are eligible to receive federal grants and are included in the National Plan of Integrated Airport Systems. These consist of 550 commercial service airports, which serve scheduled commercial airline traffic, 244 reliever airports, which relieve nearby commercial service airports of general aviation traffic, and 2,449 general aviation airports, which serve business, corporate, and pleasure fliers.

Airway System. The system that provides flight services to aircraft and monitors the airways to maintain aircraft separation, advise aircraft of traffic conflicts, and warn of adverse weather conditions. It consists of air route traffic control, which monitors commercial and some general aviation aircraft in flight between airports; terminal traffic control, which controls aircraft as they leave, approach, and land at airports; and flight service stations, which provide services primarily to general aviation aircraft. Also referred to as the air traffic control system.

Aviation System. As used in this study, includes both the airway and airport systems.

Baseline Projection. CBO projection that maintains real spending from the current budget year through the end of the projection period, by inflating current appropriations and estimating the spending that would result.

Cash Balance. See Unexpended Balance.

Commercial Aviation. Domestic, international, freight, and commuter air carriers.

General Aviation. Air taxis, rotorcraft, and aircraft flown by business, corporate, and pleasure fliers.

General Fund. Receives government receipts that are not earmarked for specific purposes and is charged with expenditures from those receipts for the general support of the federal government.

Trust Fund. Receives funds earmarked by law for specific purposes and is charged with the expenditures to finance specific programs and accounts.

Trust Fund Balances:

Unexpended Balance. The balance in the trust fund that has not been spent. Often referred to as the cash balance, though nearly all of it is invested, by law, in interest-bearing securities of the federal government.

Committed Balance. That portion of the unexpended balance in the trust fund for which spending authority has been provided. Spending authority may be either from authorizations (for the airport grants-in-aid program) or from appropriations.

Uncommitted Balance. That portion of the unexpended balance in the trust fund for which spending authority has not yet been enacted. Also referred to as the accumulated surplus in this study.



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